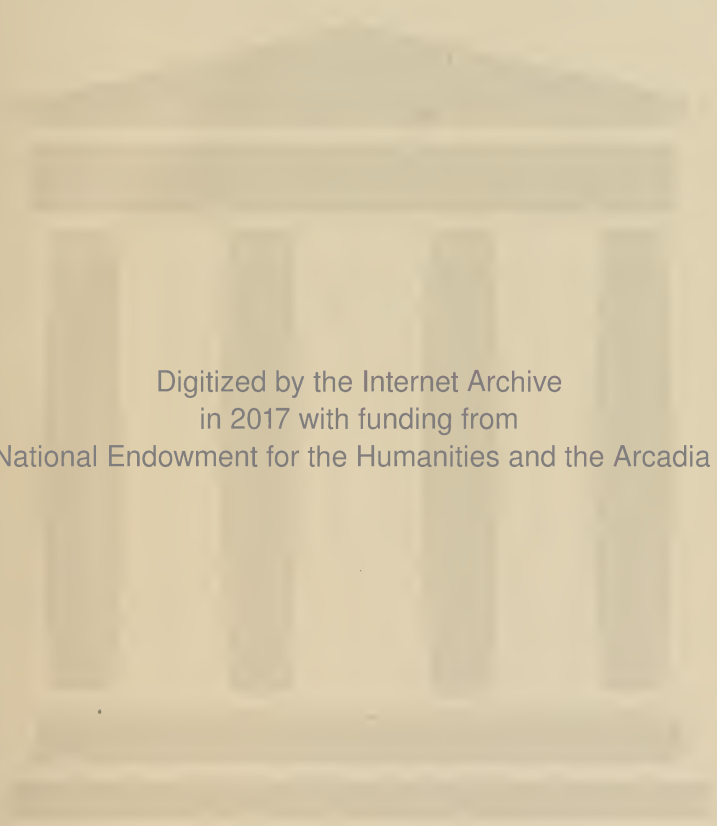




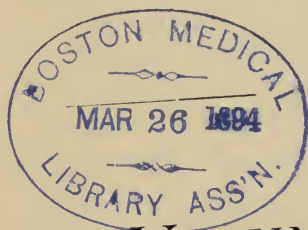
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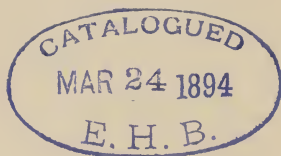
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Original Articles.

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SOME SUCCESSFUL METHODS OF TREATING ALOPECIA AND ALOPECIA AREATA.

By A. H. OHMANN-DUMESNIL,

Professor of Dermatology and Syphilology in the St. Louis College of Physicians and Surgeons.

Alopecia and alopecia areata are diseases of the scalp which have always interested dermatologists, and the problems connected with these conditions have acquired a new impetus, of late years, by reason of the extensive studies which have been directed toward them. The questions which have been considered mostly are the etiology and the treatment of these conditions. These questions are interdependent to a great degree, and for that reason it may not be regarded as inopportune to devote a few words to the consideration of the etiology of these diseases before devoting the major portion of this paper to the subject matter pure. As the etiology and consideration of the causes leading to the diseases, of whose successful treatment I propose speaking, have a considerable influence upon the adoption of successful therapeutic measures, I will give a brief résumé of these questions, more especially as they have been the topics of many long and unsatisfactory discussions, and are still regarded as being in a great measure *sub judice*.

In regard to the etiology, there exists some difference of opinion, and the advocates of the different theories advanced may be roughly divided into three groups, viz.: Those contending that all cases of these diseases are of parasitic origin; those who contend that the origin of these troubles is of a neurotic character, and those who are inclined to favor the one or the other, according to the particular indications presented in each individual case. The upholders of the parasitic theory have made a strong case, apparently, but their arguments possess certain inherent defects which are of such a nature as to considerably invalidate their claims. The evidence is far from convincing in a large number of instances, and we have added to this the suppression of the negative cases of such experiments as do not tend to support the view which is advanced. The fact that strong antiseptics, locally applied, will tend to promote a growth of hair, is no proof that the result is due to the destruction of parasites or of micro-organisms of a pathogenic character. The further fact that these applications must be of considerable strength seems to invalidate the position still more. For it can be justly argued that the growth is due not to the parasitical properties of the remedy, but rather to its stimulating qualities. Again, we have had exhibited to us cultivations of organisms obtained from such cases. Unfortunately for the cause advocated, these cultivations have but too often proved to consist simply of saprophytes, and the same could be obtained from organisms found on perfectly healthy scalps. Such evidence falls very short of proof, and this is the result found in a large number of cases which present themselves for treatment and who are affected with the troubles under consideration. I do not intend to deal exhaustively with these defects in the matter of proving the opinion advanced, but merely desire to point out some possible sources of error to which investigators have become blinded by their enthusiasm.

Those who contend that alopecia and alopecia areata have a constant neurotic basis have a certain amount of objections to contend with which they have not yet successfully overcome. They have very plainly demonstrated that the parasites are not the cause, in a certain number of instances, They have also

proven, experimentally, that lesions to certain nerves are followed by alopecia. But, in some cases, all the neurotic phenomena discoverable and undiscoverable have been treated with no beneficial results, even when aided by external stimulating measures. No results could be obtained until strong parasitocides were employed; and, while claiming merely stimulating properties for these agents, the obvious conclusion could not but force itself upon an impartial observer that the disease was, in fact, of parasitic origin. I do not desire to dilate further on this point, but will pass on to that class of observers whose conclusions appear to me to be not only more rational, but correct, and in consonance with clinical and pathological observation, besides being confirmed by the therapeutic results obtained.

I refer to those whose contention it is that alopecia and alopecia areata may be due to either parasitic or to nervous trouble, or to both combined. The negative results obtained by the rigid adherents to either of the first two theories have found that in cases of failure a resort to the other method or the adoption of both has resulted in success. Those who persisted in one plan have been mortified by observing that failure followed their best efforts. Some clinical considerations are not dealt with in a manner which the importance of the subject demands. For there are certain objective symptoms which can be observed in some cases which will serve to distinguish between an alopecia of neurotic and one of parasitic origin. Of course when I refer to alopecia, in this paper, I do not desire to include the senile form, nor that in which the follicles of the hair have been destroyed, atrophied, or lost beyond redemption; but rather to presenile alopecia, defluvium capillorum and alopecia areata. In the last affection, we find the neurotic and parasitic types rather plainly differentiated by their respective histories and objective characteristics. In the parasitic form a history of infection may or may not be made out. The disease may be traced to the barber's brush, the infection from caps, hats, etc., worn by other individuals suffering from the same trouble; or nothing definite may be learned in this respect. Itching, of a more or less marked character, will be present. The history of the attack will show that the

falling out of the hair was gradual and peripheal. On inspection, the involved area does not present a growth surface. It is roughened to a certain degree and the hairs at its border are lacking in lustre, as well as easily broken upon attempting extraction.

Those portions of the scalp most often scratched are involved and include the temporal and occipital portions of the scalp, with occasionally the vertex. Auto-inoculation can be clearly made out in many cases and the entire evolution of the trouble traced upon the scalp of the individual. Scrapings from an affected area, if carefully rubbed into the skin of a dog, will produce an analogous condition, thus verifying in a satisfactory manner the positive character of the cause of the alopecia. It must always be remembered, however, that these conditions all apply to cases which have not been tampered with. In the neurotic variety of alopecia areata, which, in my experience, occurs more frequently than the parasitic, we may or may not have a history of neuralgia, traumatism, or nervous or mental shock. The subjective sensations, if any exist, are not sufficiently well marked to attract much attention. The history of the onset is generally that it has been sudden, one or several areas becoming suddenly denuded of hair. These may be roundish or ovalish, or of irregular contour. The sizes of these areas also vary considerably, and while progressive to a certain extent we have a stationary period establishing itself and an effort at spontaneous recovery. Objectively the denuded spots have a white, almost glistening, appearance, the comparison to ivory being a very apt one. A peculiarity which is present in this disease is that it is not limited to the scalp alone, but may attack, as it often does, the eyebrows, axillæ, breast and pudenda.

The few symptoms enumerated are sufficiently well marked to distinguish the conditions from one of parasitic origin. But we are sometimes called upon to treat cases of alopecia areata in which both a parasitic and neurotic cause is at work. In these the mixed effect due to the different causes may frequently be observed quite readily, whereas, in others, the problem presents such confusions as to require fine discriminative powers as well as close observation and examination.

It is hardly necessary to allude, to any considerable degree, to the other forms of alopecia which I have mentioned. The same general conditions and appearances will hold as in alopecia areata *mutatis mutandis*. Concomitant phenomena are always found in connection with each individual case of such a nature as to lead to tolerably accurate conclusion in regard to its etiology. This being done, the rational method to pursue readily suggests itself, and the success of the therapeutic measure employed will wholly depend upon a proper selection of the remedies and the method of their application.

Having made these few preliminary remarks, I now desire to speak of some of the successful methods which I have employed in the treatment of some cases of alopecia and alopecia areata. I have briefly alluded to the etiology of these affections in order to avoid useless repetition later on, and will premise by saying that I desire to speak of methods without entering into a detailed recital of cases, as those of the same type would be similar to one another, and, on that account, possibly wearisome to the reader. I will further state that I only proposed speaking of alopecia areata and of presenile areata, these being by far the greatest number of cases of falling out of the hair which I have had occasion to treat, and, for that reason, the successful treatment of such possesses more value than it would in cases less frequently observed and subjected to therapeutic measures.

The cases of presenile alopecia which I have had occasion to treat (exclusive of such as were of syphilitic origin) occurred in males, and the majority of these were light blondes. In all cases the hair was fine and silky, and the scalp rather pale. In some seborrhea existed, and the amount of secretion varied from very small amount to quite a considerable quantity. In all these there was a history of more or less itching, and of a gradual loss of hair, chiefly at the angles of the forehead and the vertex. Combing the hair showed that this loss was considerable, although a considerable portion consisted of bed-hairs, so that the actual loss was by no means equal to the apparent. All were individuals who were otherwise in apparent health, and whose functions in general seemed to be in perfect condition with the exception of one, possibly. The nervous

system lacked that stability and repose which should exist in the normal individual, and which is so essential to proper assimilation. While this condition was not so apparent in all those who did not exhibit the grosser phenomena of nervous disturbances, they did exhibit psychical phenomena which plainly pointed to this state of affairs. Irritability upon slight provocation, anxiety concerning trivial affairs, depression of spirits out of proportion to the exciting cause, and similar perturbations showed themselves as evidence of the neurotic condition present in the individual. A prominent feature was the hopelessness of the patient as far as regarded any ultimate result in the treatment of his case.

It will be readily seen that such cases are not very promising, yet a little moral suasion has quite an effect in improving such a condition, and success is not the impossibility which it might appear at first blush. The general treatment I have adopted has been various in different cases, but has been directed to the amelioration of the nervous system. In some cases I have ordered the following pill thrice daily:

R	Strychniæ Sulphat.....	gr. $\frac{1}{60}$
	Ferri Redacti.....	gr. j.
	Quiniæ Bisulphat.....	gr. j.
M.	Ft. Caps. No. j.	

or, if starvation of the nerves seemed to be present, the compound syrup of hypophosphites (Fellows) was ordered taken in drachm doses four times daily, with a milligramme ($\frac{1}{60}$ gr.) of strychnia sulphate with each dose. In some cases I have found it advantageous to supplement this treatment with muriate of pilocarpine taken at bedtime, a powder containing $\frac{1}{8}$ to $\frac{1}{6}$ of a grain of the remedy being taken in water. The effects of this internal medication was not a matter of coincidence, for, by its alternate withdrawal and resumption, most notable differences could be observed. These differences were so marked as to attract the attention of the patients and lead them to the conclusion that the internal medication was of a most beneficial character in the improvement of the local condition. Such results occurred not only in one case, but in several, and, although failure might follow the same course in some future cases, the success which has been accomplished is sufficiently encouraging to justify a continuance of the method until a better one could be suggested that will stand as a rigid test.

Alopecia areata presents difficulties, occasionally, of such a nature as to almost make us despair of any successful issue.

I have been extremely fortunate in securing good results and can only attribute them to the energetic means which have been used.

Before entering into the consideration of the treatment, I desire to premise that I have always been careful to distinguish between the parasitic and the neurotic varieties of the affection. Having done this, the treatment was adapted to the condition present, and, whilst one method might fail, the general principle was always kept in mind in the application of the treatment.

In the parasitic form of *alopecia areata* I have used two parasitocidal mixtures. One, the weaker, for the purpose of applying to the entire scalp and thus preventing new infection and a further spread of the trouble; the other, the stronger, to apply directly to the implicated areas for the purpose of destroying the parasite, and thus putting an end to the disease. Both preparations were ordered applied twice daily; and, as all the cases I observed occurred in males, I had the hair clipped close to the scalp, thus facilitating a thorough application of the remedy. For the weaker application I first used a 1-750 bichloride of mercury solution, afterward using a 3 per cent. creolin solution. Both acted well, and the only advantage in the latter is the smaller danger of toxic infection from its use. This wash is to be applied to the entire hairy scalp, the affected areas being attended to after the first operation had been gone through with. For the affected areas I ordered the application of *sapo viridis*, and this to remain about five minutes. Then a mild scrubbing rubbed in in small quantity.

Rx Hydrarg. bichloridi.....gr. j.
 Lanolini..... 3 j.
 M.—Terge bene.
 Sig.—Apply twice daily.

In a comparatively short time a strong, healthy growth of hair could be observed.

I desire to state that it is not always necessary to apply this last twice daily. It will be easily determined by the observer

whether this is necessary or not. Not infrequently one application a day or every other day will, in a short time, be all that is necessary. I have had no occasion to change the composition of this application, as in the few cases in which I employed it, it proved satisfactory.

In alopecia areata of neurotic origin, which, in my experience, occurs much more frequently, I have given internal treatment in some instances and not at all in others. After trying various internal remedies with more or less success, I have finally adopted the same preparations as those I have spoken of in the treatment of presenile alopecia. They have seemed to serve the best purpose and gave the best final results. I have also observed that this internal treatment, is of positive and undoubted benefit. Discontinuing the remedy is followed by inferior results, and the effects of the resumption of the treatment become very quickly apparent. In some cases, however, general treatment appears to be entirely unnecessary, but I have found them to be very few in number. It would appear that they are such in which a general shock was experienced from a traumatism and the nerve equilibrium was regained in a comparatively short period of time. Even in these, however, if no form of treatment has been essayed for some considerable period of time after the injury, internal treatment is found of benefit. Yet, cases of the last class, must of necessity be very infrequent. In those experimental cases in which nerves have been exercised, and the operation was followed by alopecia areata, the regeneration of the hair occurred spontaneously and local as well general treatment appeared unnecessary; but they certainly are not cases which could be given as a criterion by which to judge.

To come to the local treatment of alopecia areata. The methods which I have found successful are essentially of the same character, although they differ materially in application. I do not claim any originality for either, as one is rather old and the other was suggested some little time since. They are essentially irritant in nature, but efficient in effect so far as my experience enables me to judge. The first one I employed is the suggestion of a French author, and consists in applying cantharidal collodion to the affected area. After vesication

has been established, a dressing of some bland ointment is used. As is well known, cantharidal collodion varies much in its composition. We find that, in some instances, it acts very promptly, whereas in others its action is quite slow. Again, its effect in the same individual may be comparatively superficial or quite deep, depending upon the amount of the cantharides present, or the activity of the fly used in its composition. These circumstances necessarily acted as factors in controlling the frequency of application of the remedy. In some cases I applied the cantharidal preparation twice a week, and in others it could be used but once in the same length of time. The reaction was more or less prompt, and, in some cases, I have had the unfortunate experience of seeing no effect of a distinct character beyond some superficial irritation of a rather mild character. However, by obtaining a good article I have been enabled to obtain excellent results in a comparatively short time. While the effects produced were of the best, the various inconveniences attending its use made the method anything but a pleasant one to the patient. The collodion is not a very easy method to manage. It mats the hair, does not look well, is very difficult to remove, and is inconvenient to handle. Added to this the disagreeable necessity of continuously applying an ointment further increased the aversion of patients to the entire curative procedure of a local character. I often experienced much difficulty in persuading patients to continue the treatment, and it was only the good results obtained which led them to submit to it, the hope of a speedy recovery and a proportionately short submission to the entire process. This difficulty was particularly marked in females, and it was with much trouble that they could be persuaded to continue a routine which was so distasteful in many respects.

When a new method was announced which obviated many of these inconvenient accompaniments and which was claimed to be much superior in its results, I immediately adopted it, and desire here to express my complete satisfaction with the results attained through its use. I also desire to express my gratitude in a personal point of view to its originator; and, I have no doubt, every dermatologist who has given the method a fair trial will join me in this expression of thanks. I allude

to the application of pure carbolic acid as advocated by L. Duncan Bulkley. His technique is about as follows: He advises the application of pure carbolic acid once every two weeks to the affected areas. The amount of surface to be thus treated must not exceed two square inches. He further states that two, or, at the most, three, applications will suffice to effect a complete return of the hair. It may be Bulkley's experience to have had tractable cases; or, I may have been unfortunate enough to have had only stubborn ones. This much, however, is certain. As soon as the method was announced it struck me as a particularly good one to use. I had a patient to whom it was applied as directed, but I had no success. This led me to modify the treatment, which I did as follows: Instead of making an application once every fortnight I made it twice a week, and instead of limiting it to two square inches I applied it to the entire surface which was involved, this amounting to about ten square inches. Moreover, I was not at all satisfied with the ordinary 95 per cent. carbolic acid which I could obtain. It did not seem to be sufficiently strong. I obtained some pure English carbolic acid, and by this means obtained more rapid and marked effects. With this product it is unnecessary to rub forcibly into the skin, and the result obtained appears to me to be much more rapid. It is true, that my experience thus far has been limited to but a few cases; but they have proven so satisfactory that I will continue until something better is offered. The method of applying the agent consists in freely swabbing the affected area with it, no matter how much of the scalp is involved. Those portions which are affected by the acid turn milky white in a few moments, and if they are not thus affected they are touched again. This is all that is necessary. If the parts that turn white show very marked inflammatory reaction, they are passed over at the next sitting. Generally, however, there is at most but a slight amount of desquamation.

Such a treatment, while rather painful, is efficacious. I have been in the habit of also employing it in presenile alopecia, in a modified manner. Instead of applying the carbolic acid liberally I have done so sparingly, and at intervals of one

and two weeks. The impulse this procedure gave to the growth of hair was quite noticeable.

I do not wish to take up more time with the subject. My object has been simply to submit an experience I have had, and one which, up to the present, has proved highly satisfactory to me.

It is certainly to be presumed that, in the hands of others, the same results should follow the same line of treatment, and be attended by the same success. That the methods I have described are infallible I certainly do not want to claim; but that they are sufficiently rational to induce a trial, I hope has been shown in the foregoing paper.

I do not desire to detail any successful cases, as I have already overstepped my limits in this paper. The methods I have described have been used upon quite a number of cases, and the successes which have been attained have led me to describe what might prove equally successful methods in the hands of others.

SARCOMATOUS TUMOR OF THE LEFT FRONTAL LOBE.

By S. T. ARMSTRONG, M. D., PH. D.

Visiting Physician Harlem Hospital, New York City, Instructor in Nervous Diseases New York Polyclinic, etc.

At the present day, when every fact that renders the diagnosis of intracranial growths more certain is of value, but little apology need be made for recording a single case. Cerebral tumors do not multiply rapidly in individual experience, and it is by collating and studying numerous clinical cases that fundamental facts are obtained.

For the opportunity to see the following case I am indebted to my friend, Dr. J. E. Black, of Memphis, Tenn. R. Bentley, aged twenty-four years, a native of England, and a laborer by occupation, was admitted to the Memphis City Hospital August 29th and died August 30, 1886. He was admitted about 4 o'clock in the afternoon, and was suffering with tremor involving alike the upper and lower extremities, presenting the appearance of a man affected with paralysis agitans.

The patient stated to the interne that he had been affected with such tremor as long as he could remember; that it was less intense at some times than at others, but during the past eighteen months it had been more noticeable than before. He stated that he had never had venereal disease, nor was he aware of ever having received a blow upon the head. He was stupid and indifferent to his surroundings. During the night of his admission he became unconscious, and when I saw him on the 30th he was breathing stertorously; and occasionally there was a shivering movement of the body as in a chill; the patient was comatose and died on the evening of the 30th.

The necropsy was performed twenty hours *post mortem*; rigor mortis was established. On removing the calvarium the membranes of the brain presented a normal appearance. On making horizontal sections of the brain substance the anterior portion of the corpus callosum was found to be very soft; and just below its level, within the white substance of the left frontal lobe, was a yellowish-gray colored tumor, 4.5 centimetres in diameter and 11.5 centimetres in circumference. While the gray matter of the anterior frontal convolution was but slightly softened at its junction with the white matter, the latter was very much broken down, and held the tumor in a soft cavity of necrosed (white softening) tissue, from which it was easily removed. The arachnoid covering the medial surfaces of the frontal lobes was adherent, apparently in consequence of the adjacent inflammatory process.

The tumor was situated well in front of the genu of the corpus callosum, though the necrotic softening of the white tissue extended posteriorly to that point. It weighed 28 grammes; one section was firm, and it presented the appearance of a sarcoma. Unfortunately it was lost during a change of residence, and a microscopical examination was not made. The rest of the brain was normal. The thoracic and abdominal viscera were congested, but normal, excepting the spleen, which was soft and pultaceous.

At no point did the tumor seem to come into contact with the meninges; and while it developed at the expense of the cerebral tissue of the frontal lobe, it apparently did not develop from that tissue. The probable origin was from a small blood vessel or from a lymph-sheath.

There was no apparent lesion of the meninges covering the motor areas, nor of the cerebral cortex of these areas, nor of the motor tracts, to account for the tremor that was noted by the interne when admitted, and that the patient said he had had for so long.

The patient had been laboring in a malarial country, the spleen exhibited the degenerative lesion of chronic malarial poisoning, and the tremor may have been increased, as well as the sudden death caused, by malarial toxæmia.

It was impossible to trace the man's movements previous to his admission to the hospital, so nothing could be learned of his mental condition before he came under observation. At that period of the year, and in that locality, many cases of malarial fever presenting somewhat analogous conditions are admitted for hospital treatment. And as the internes were undergraduates, histories taken preliminary to the morning visit of the physician in charge were meagre; and this case was supposed to be one of malarial poisoning only.

The stupor may have been caused by the toxæmia, or it may have been in consequence of the lesion of the frontal lobe, producing the symptom noted by Ferrier in experimental injury of these lobes.

In Knapp's excellent monograph on intracranial growths, a case of tumor of the prefrontal region is reported in which there were weakness, quietude, coma, and general tremor just before death.* So the case herein reported is not singular in that symptom. In most reported cases of tumor in the prefrontal region, the symptoms are those general in brain tumor, with the addition of more or less gradual failure in the power of attention, mental slowness and uncertainty, and eventually stupor and coma. Besides these, if in its growth the tumor press on the olfactory bulb there will be disturbances of smell and sometimes unilateral anosmia; while pressure on the optic nerve will cause monocular neuritis; and if the chiasm is pressed upon, homonymous temporal hemianopsia will result. Should the tumor develop posteriorly, it will eventually press upon the motor centres, and the resulting

* Bramwell has also reported a case in which pressure tremor was produced by a cystic tumor of the frontal lobe.

symptoms of focal spasm, paresis, or epilepsy will assist in localizing the lesion.

The only hope in such cases is timely surgical interference. A careful and deliberate survey of the symptoms having determined the probability of the lesion, trephining should be performed and the frontal lobe examined, and if the tumor is found it should be dealt with according to the approved methods of surgical procedure. Non-interference will result fatally; operative interference may save life.

Proceedings of Societies.

THE NEW YORK ACADEMY OF MEDICINE.

SECTION IN PEDIATRICS.

Stated meeting May 12, 1891, Dr. W. P. Northrup, chairman.

A CASE OF RANULA

was presented by Dr. J. Lewis Smith. The child was twenty months old, and the ranula was noticed soon after birth. It did not interfere with nursing, but was beginning to produce a deformity, causing the mouth to open, giving the characteristic frog-like expression. The child did not talk, although of ordinary intelligence. Development was somewhat retarded, and for three months there had been no increase in weight. The tumor was double, occupying both sides of the frenum, and apparently very vascular. Large vessels could be seen radiating over the surface. Two operations were available. One consisted in passing a silver wire around and through the mass so as to obliterate it by causing inflammation. The other was excision of a portion of the growth, but owing to its extreme vascularity, serious hæmorrhage was to be feared.

Dr. S. Baruch thought the danger of hæmorrhage was not great, and favored the excision of two-thirds of the mass.

A CASE OF MICROCEPHALUS

was presented by Dr. Henry Koplik. The patient was four months of age, and was the sixth child. The head was very small, and the anterior fontanelle was open, but the sutures were closed. There was distinct left facial paralysis, and upon touching the lower jaw it moved with a spasmodic jerk. The legs were deformed from lack of development of the peronei muscles. The reflexes were increased, and there was also spastod contraction of the fingers. Nystagmus was observed, but was not constant, appearing only when the child looked toward the left. The probable condition present was microcephalus, with congenital retarded development of the cerebrum, with involvement of the pyramidal tracts. The question of a Lannelongue operation was a very important one. The speaker believed that the nervous system indicated lack of brain development, and that nothing would be gained by operating on the skull.

Dr. W. M. Leszynsky believed that the Lannelongue operation was a very serious one. He had recently seen two fatal cases. In the present case he did not believe that an operation upon the skull would aid the brain, which was evidently an undeveloped one.

The subject of discussion was:

SUMMER DIARRHŒA IN CHILDREN UNDER TWO YEARS.

The first paper, entitled "Relation of the Stools to the Lesions and to Prognosis—Nervous Symptoms and Their Origin," was read by Dr. Henry D. Chapin. When the disease is located in the two extremities of the alimentary canal, the stomach and the lower segment of the large intestine, the discharge will quite surely locate for us the seat of the trouble. In the intermediate tract, however, it is usually difficult to judge with certainty either the extent or location of the lesion by the character of the stools. A classification that can be made only upon post-mortem examination is of but little value clinically. The following is a fair clinical classification, and includes the vast majority of our cases:

1. The diarrhœa of acute indigestion.
2. The diarrhœa of inflammation.
3. The diarrhœa of chronic indigestion or atrophy.

In the first the stools consist of fæcal matter soon becoming thin and watery, and containing articles of undigested matter, consisting chiefly of lumps of fat and undigested caseine. If these undigested masses continue to be passed the stools soon contain more or less thin mucus. If starchy food has

been given, it may be passed unchanged in appearance. In general, the passages in acute indigestion consist of undigested and fermenting food and the products of an irritated mucous membrane.

There is a point where irritation, if unchecked, becomes inflammation, and the second form of diarrhœa is developed. It is difficult here, as in other places, to always distinguish that point. When well developed the temperature will remain elevated. The passages, if milk is the food, will contain masses of fat and lumps of curd. If milk is stopped and meat broths are given, the passages usually become darker colored, and contain very offensive feculent matter. Mucus in various conditions soon becomes a prominent element. If colored with bile segment, it is an indication of jejunal or iliac catarrh and is usually accompanied by undigested food. The closer the mixture of the mucus with the fecal masses, the nearer is the lesion to the cæcum. When the lower colon is most involved, the mucus will be more distinct, passing in glairy masses or sometimes in pulpy, shreddy particles presenting the appearance of false membrane. Blood, if mixed in streaks, comes from the ileum or upper colon; if free red, from the lower colon or rectum.

White, dryish, putty-like stools consist principally of fermenting fat; brownish stools of albuminous matter from animal broths, frequently very offensive from advanced decomposition. The yellowish, watery stools are simply the ordinary fecal discharges diluted. The causation of green stools has been a subject of much controversy. However caused, they are clinically noticed in connection with much irritation of the bowels, with active fermentation of their contents.

The presence or absence of ulceration can not be determined with certainty from the character of the passages, but when there is rapid loss of vitality, out of proportion to the number and character of the stools, ulceration is to be suspected.

The most persistent form of diarrhœa and most difficult to treat is that resulting from chronic indigestion and atrophy. Putty-like stools alternate with green mucus, or brownish offensive discharges. Assimilation becomes more and more defective, and the child dies from exhaustion. The underlying trouble is defective vitality, not inflammation, and antiseptics and astringents are useless.

The nervous symptoms accompanying summer diarrhœa are numerous and often serious. Impoverished blood passing sluggishly through the brain will account for some of them. It is probable, however, that as a rule those symptoms are due

to irritation produced by toxæmia. Such toxæmia may be caused by the absorption of ptomaines resulting from fermentation in the bowel. The brain symptoms thus produced often disappear upon thoroughly clearing the bowel. Uræmic poisoning is also responsible in some cases for brain symptoms and death.

CONDITIONS INDICATING CHANGE OF AIR AND BATHS IN THE
SUMMER DIARRHŒA OF CHILDREN

was the subject of a paper by Dr. Simon Baruch. The removal of the cause of disease being the chief aim of modern therapy, the insanitary conditions which actively contribute to the development and maintenance of summer diarrhœa becomes an important element.

A change of air is not demanded by reason of any special difference in the proportion of oxygen or any other chemical constituent, but rather to avoid two sources of error:

1. A high temperature and marked humidity, one or both.
2. The presence of impurities.

Whenever treatment seems unavailing, and prostration and intermitting fever are present, the question of change of air become important. Of what avail are stimulants, tonics and food when the little sufferer is forced to toss under the constant oppression of a stifling atmosphere, especially if there be also an excess of moisture. Rich and poor alike are crushed under this terrible combination. Removal by a rapid and comfortable journey to a high altitude or to the seashore, free from these prejudicial conditions, becomes imperative in many cases. The change in the entire aspect of the case is too well understood to need comment.

Among the well-to-do classes atmospheric impurities are rarely operative in summer, though imperfect ventilation often breeds them in winter. In the districts of large cities, however, this is an active factor. In these noisome tenements in which the children of the poor, and many even of the better classes of working people, are huddled the elements which contribute to the development and maintenance of summer diarrhœa find an excellent place for their culture and propagation. The elements demanded in the prevention of this disorder are clean food taken into a clean stomach and its detritus removed through a clean intestinal tract. It is to obtain these conditions, not more oxygen, that a change is demanded. The work carried on by the St. John's Guild is deserving of the utmost commendation. To the poor this change from the filth-laden atmosphere of the city to the pure

breezes of the harbor comes as a refreshing and vivifying blessing that can not be overestimated.

One point in this connection must be noticed. While of the utmost importance in the tenement districts, it is not always so important where the conditions are more favorable for home treatment. The change from a comfortable home to a country hotel, often overcrowded, is not to be advised without careful reflection. The benefits accruing to the little patient do not always warrant the expense, anxiety and disturbance of family resulting from a sudden removal of a child without due preparation when the symptoms become alarming. The advantages and disadvantages should be carefully considered. We should see that the milk is sterilized, that the colon has been irrigated, and that all measures have been tried before advising a change.

The lessons derived from a long experience at a summer resort are two:

1. While all cases of summer diarrhœa of infants living in crowded homes demand change of air, treatment is, at least, equally important.

2. Among the better situated, change of air need not be insisted upon until all approved methods of treatment have been fairly tried.

Bathing for cleanliness is always demanded in summer diarrhœa, both for the purpose of cleanliness and by maintaining the functions of the skin to relieve intestinal congestion. For therapeutic purposes baths are especially indicated in acute cholera infantum, for they offer more positive relief and contribute more to cure than all other measures. In this condition we find hyperpyrexia, though the extremities and face may feel cold and clammy.

Whenever the temperature exceeds 102 deg. F., a cooling procedure is indicated, and it is important that the proper method of bathing be observed. The child should be placed at full length in a tub of water at 90 deg., after the face and head have been bathed with ice water. Gentle friction should be constantly applied, while some one is removing with a pitcher the tepid water and replacing it with ice water. The temperature of the water is thus gradually lowered to 80 deg. If cerebral symptoms are present, water at 60 deg. should be poured over the head and shoulders. The bath, with friction, should be continued fifteen minutes, unless cyanosis of the face or decided shivering appears.

The latter is prevented by active friction. After the bath the child is placed on a linen sheet lain smoothly on a blanket. If the temperature before the bath was 103.5 degrees, or over,

it should be wrapped and allowed to dry; if under that, it should be dried and the clothing replaced at once. It should be understood that the object of the bath is not primarily to reduce temperature, although this is an important incidental result. We have here a vaso-motor paralysis, as evinced by the pallor of the skin when the rectal temperature is high. This condition is counteracted by the bath and friction, as described. The effect of a skilfully administered bath in such conditions of nerve prostration must be seen to be appreciated.

In subacute forms of summer diarrhœa the chief condition indicating baths is the general depreciation of the system arising from the great drain upon the blood and nerve tone. We here have the symptoms of chronic adynamia. To stimulate the appetite and improve the general nerve tone should be our endeavor. The most improved tonics often fail. In those cases general ablutions morning and evening are preferable to baths. The child is placed on a soft woollen blanket and the abdomen, chest and back are rapidly bathed, not sponged, as follows: from the hollow of the hand water at 70 deg. F. is poured upon the skin, which is then gently rubbed with the same hand. The body is rapidly dried, and friction with a rough towel is employed if the temperature is below 99.5 deg. If the temperature is above 102 deg. a general bath is indicated.

THE USE OF DRUGS IN DIARRHŒA; INDICATIONS FOR ALKALIES, ACIDS, ASTRINGENTS AND OPIATES.

Dr. J. Milton Mabbott read a paper upon this subject. Much clinical and experimental effort has been expended in recent years upon that much vaunted class of drugs, the antiseptics and antizymotics. It was early inferred that it would be difficult to find an antiseptic capable of internal administration in doses sufficient to kill microbes without proving poisonous to the patient. Baruch, five years ago, referred to the large quantity of antiseptic necessary to sterilize so extensive a surface, and Vaughan showed the feeble inhibitory power upon the tyrotoxicon producing germ of all the antiseptic drugs. Holt has pointed out that by reason of absorption the soluble antiseptics can not reach the lower bowel, where the chief trouble lies. But insoluble drugs in a fluid menstruum have very weak antiseptic power. It is probable that the action of bismuth is due more to its astringent and soothing properties than to its antiseptic power. It seems impossible at present to administer antizymotic drugs by the mouth in such a way as to influence materially the small and large intestine. We are obliged to admit that they have been tried and found wanting.

Nevertheless, the bacterial studies of the disease, especially those of Booker, have taught us to secure asepsis where we can not apply antisepsis. They have also made clear the *rationale* of certain drugs, especially carthartics.

Stimulants, though locally undesirable, are at times necessary, and sedatives may be required to relieve pain.

Until recently there seems to have been general consent to the administration of alkalies. But, now that we endeavor to promote asepsis and control fermentation by evacuant, dietary and hygienic measures, they are certainly less important than formerly. They are usually given with or soon after feeding. When using pepsin, alkalies should be given midway between feedings.

The indications for acids are doubtful. Lactic acid as proposed by Hayem is advocated in (1) acute infectious diarrhœa, where the stools are numerous, watery and often foul, but yell w in color, and (2) in green bacillary diarrhœa, for which it is recommended as a specific. Numerous observers have found the reaction of the alimentary canal in healthy infants acid throughout, and Pfeifer has shown that green stools are associated with alkalinity. Hence, the use of acids would seem to have a rational basis. The dilute mineral acids are commended by many, the dose being one to five drops, administered twenty minutes after feeding. The vegetable astringents during the last few years have been almost discarded. The same is true also of mineral astringents with a single exception. That exception is bismuth—the subnitrate being the preparation universally esteemed. It is prescribed in much larger doses than formerly, twenty grains every two hours sometimes being given to an infant.

Opiates are less used than formerly. They undoubtedly check peristalsis. As peristalsis is increased in diarrhœa, this action is desirable after the bowels have been emptied of their objectionable contents, but highly dangerous before. The other indications for opium are the relief of restlessness, pain and tenesmus, and the control of frequent watery passages. Ashby and Wright recommend it in the latter stages if the passages continue small and numerous. Holt and Crandall always prescribe the opiate separately, so that it may be conveniently increased, diminished or withheld at will, for increasing fever or toxic symptoms call for its discontinuance. It should not be given when the passages are infrequent and of bad odor. A decrease in the number of stools, while they become more offensive, contra-indicate its use and demand evacuants. Relief of pain is one of the highest duties of the physician, and, unless definitely contra-indicated, sufficient opium should be given to accomplish this.

FEEDING ; STERILIZED FOOD ; GENERAL FEEDING,

was the subject of a paper by Dr. Henry Koplik. A number of cases were reported in detail which tended to show that while some infants taking an artificial food show no traces of sugar in the urine there is a considerable proportion, which do show this abnormal condition. On the other hand, infants taking rationally prepared milk or mother's milk showed no trace of sugar.

Although numerous theoretical reasons may be given against the use of sterilized milk, clinical experience proves that it is better tolerated by the stomach than any other artificial food. It has a peculiar taste, but infants soon develop a liking for it, and prefer it to other milk.

At the Good Samaritan Dispensary during the summer of 1891 milk was sterilized on a large scale. Six bottles, containing four or five ounces of milk, were given to each patient, the sum of 8 cents being charged. In this way 40,000 bottles were distributed to 575 different infants. The results were favorable in the extreme. The chief drawback was inability to control the milk before receiving it at the dispensary. Changes that have already taken place can not be remedied by sterilizing. Milk that appears to be good when cold will often prove unfit for use when heated. Milk that is several days old may show no signs of change, but when boiled will promptly curdle, owing to the formation of lactic and other acids.

When sterilized it will appear flocculent and should be rejected, as it is positively dangerous. It is also impossible in New York to obtain milk less than twenty-four hours old, and much of what is used is several days old, and has been preserved by means of ice and chemicals.

To obviate certain changes which take place in milk sterilized at high temperature, an attempt has been made to destroy the activity of the germs by subjecting it to a lower temperature.

In Boston, Dr. Rotch has accomplished this at a temperature of 167 degrees F., but the milk used is unusually fresh and pure. Another method recently proposed is that of bringing the milk quickly to the boiling point, and then placing it at once in a cool place. While milk thus treated keeps much longer than ordinary milk, it should be distinctly understood that it is not sterilized.

Resterilization, by repeatedly subjecting milk to a high temperature, is not to be commended. Milk is a very complex fluid, and every disturbance of its elements renders it less desirable as a food. Our aim should be to produce as little change as possible. If, therefore, it can be rendered safe by

heating to a less degree, it should be done. This process of heating milk to a temperature of 167 degrees F. and cooling it quickly is now known as pasteurization. It does not actually sterilize the milk, but renders inactive certain ptomaine producing germs. Such milk will keep several days, and as at this temperature it is but little, if any, changed in its constituents, it presents an improvement over the older forms of sterilized milk.

Dr. J. Lewis Smith asked Dr. Koplik how long he would subject the milk to heat in the process of sterilizing. Before sterilized milk was known, he had been in the habit of directing the milk for the child to be subjected to the heat of boiling water for two hours, but now advises but twenty minutes.

Dr. Koplik replied that after twenty or thirty minutes, when the Arnold Sterilizer is used, the hood could be removed.

The chairman referred to the formula proposed by Dr. Blackader at the recent meeting of the American Pediatric Society, the Arnold apparatus being used: a pint of water, a Bunsen burner, and fifteen minutes. The hood may then be removed and the cover left ajar. This is effectual for pasteurization.

Dr. A. Jacobi objected to the statement that he has written extensively on infants' foods "pro and con." He had never written anything in their favor, but had always opposed their use. Sterilized milk was an improvement upon the methods he had formerly adopted. It was a great error to suppose that sterilized milk was anything but cows' milk. It required just as much modification as though it were not sterilized; a good feed was not one that was simply tolerated, one upon which a child did not die—but rather one upon which he would thrive. Many an invalid owed his ill health in later life to improper feeding in infancy.

Alkalinity in cows' milk was always suspicious—for it was evident that it had been "doctored." The most dangerous alkali was bicarbonate of soda, for in milk thus treated the ptomaine producing germs developed best.

While pepsin was sometimes useful the speaker objected to its indiscriminate use. Without an acid it was inert. The best remedy referred to during the evening was irrigation of the colon. Not only did it remove decomposing matter, but burnished fluid, which was so much needed—for some is absorbed.

Dr. S. Baruch said he had not prescribed pepsin without acid for ten years, and had not administered it to children for five years.

Dr. Jacobi said, still further, that sugar was required in artificial food, but he did not believe that milk sugar was best. There was a close relationship between milk sugar and lactic acid. The change from one to the other was very rapid. Some lactic acid was necessary for proper digestion, but an over quantity produced hyperacidity and indigestion.

SECTION ON ORTHOPÆDIC SURGERY.

Stated meeting March 18, 1892, Henry Ling Taylor, M. D., chairman.

ASYMMETRY OF THE EXTREMITIES.

Dr. L. W. Hubbard presented two sisters exhibiting this condition. One child had one and a half inches shortening of the left lower extremity, and about two and a half inches shortening in the left upper extremity, which was about evenly divided between the arm, forearm and hand. There was also slight shortening of the left ramus of the jaw. Her younger sister also exhibited about the same amount of shortening of the left upper and lower extremities. The muscles were developed in both cases. Their parents were healthy Germans, and there was no history of a similar deformity in other members of the family. An attempt has been made to explain this asymmetry on the theory that there is an unusual development of the cerebrum on the two sides.

Dr. A. B. Judson had seen a counterpart of these cases in a girl of eleven years, in whom the right ear and eye, as well as the right upper and lower limbs, were congenitally smaller than the left. He suggested wearing an ischiatic crutch on the larger side, and a high sole on the smaller side during the periods of rapid growth. He thought that hip cases treated in this way owed the disparity in length of the limbs, which is found in the tibia, as well as in the femur, partly to the disease of one and the over-use of the other. Advantage should be taken of this fact in the treatment of these cases of congenital asymmetry.

Dr. R. H. Sayre said that many writers had denied that want of symmetry in the lower extremities is a cause of true lateral curvature, and that the occasional association of the two conditions is a mere coincidence. Personally, however, he believed that if the children just presented were allowed to go on to puberty without the employment of measures to equalize the limbs, they would certainly develop true lateral curvature. In one of the cases the lack of development did not seem to

him to be entirely confined to one-half of the body, as the left side of the face appeared larger than the right, although the extremities were smaller on the left than on the right. On this account, he did not think the theory that this symmetry was due to unequal development of the two halves of the cerebrum could be correct.

He agreed with the previous speaker that much of the atrophy following hip disease was due to lack of use, and he therefore heartily endorsed his suggestions as to treatment.

Dr. A. M. Phelps said that his experience had led him to believe that the shortening of the limb in hip disease is never due to anything but bone destruction, and that the employment of the treatment suggested would effect no change in the length of the limbs, although it might increase their circumference.

Dr. R. H. Sayre said that after cases of club-foot have improved sufficiently to enable them to use their feet, it is noticed that there is not only an increase in the bulk of the feet, but also in the length of the bones. It had also been observed in colleges where careful records are kept of the physical condition of the students that those who exercise regularly in the gymnasium not only have larger muscles, but are taller than those who do not avail themselves of this opportunity for physical training.

RESULTS IN CASES OF HIP DISEASE TREATED BY THE PORTABLE
TRACTION SPLINT WITHOUT COMPLETE IMMOBILIZATION
EXCEPT DURING THE INFLAMMATORY STAGE; WITH ILLUS-
TRATIVE CASES.

Dr. Lewis A. Sayre read a paper with the above title. He held that absolute immobilization of the diseased joint during the entire period of treatment, as advocated by a number of writers in the past few years, was not always essential to complete recovery, and he presented detailed histories of seven cases in support of this view. The diagnosis in all these cases had been confirmed by other surgeons of recognized ability, who had seen them in consultation. Photographs of five of these patients were exhibited which showed absolutely normal mobility of the joint, the photographs being taken with both legs straight, and the patient in the standing position and also with the foot of the diseased side on top of a chair, and again, with the patient sitting with the foot of the diseased side on the knee of the opposite side, and the knee of the diseased side dropped so as to make the leg parallel with the floor. One patient was present who could do all motions equally well with either hip, and another, who was shown as a *good*, but not as a perfect cure, who could put either foot

on top of a chair in front of him, and who could cross his legs, but who was unable to put the foot on the diseased side in his lap, as could all the other patients whose histories were reported in full.

Dr. Sayre then gave the following statistics of 407 cases of morbus coxarius, which he had treated between the years 1859 and 1889, exclusive, of exsections:

First stage.....	118
Second stage.....	119
Third stage.....	82
Not mentioned.....	88
<hr/>	
Total number of cases.....	407

RESULTS.

Cured, motion perfect.....	71
Cured, motion good.....	142
Cured, motion limited.....	83
Cured, ankylosed.....	5
Unknown.....	78
Under treatment.....	14
Abandoned.....	3
Discharged.....	2
Died of exhaustion.....	2
Died of phthisis.....	1
Died of pneumonia.....	1
Died of tubercular meningitis.....	5
<hr/>	
Total deaths.....	9— 9
<hr/>	
Total number of cases.....	407

Cases in which the author knew the result, and also the kind of splint worn between 1859 and 1889, excluding cases under treatment:

Cures with perfect motion:

Long splint.....	19 or 21.59 per cent.
Short “	54 or 28.12 “ “

Cures with good motion:

Long splint.....	34 or 38.63 per cent.
Short “	86 or 44.79 “ “

Cures with limited motions:

Long splint.....	29 or 32.95 per cent.
Short “	49 or 25.52 “ “

Cures with ankylosis:

Long splint.....	3 or	3.40 per cent.
Short "	1 or	0.52 " "

Deaths:

Long splint.....	3 or	1.56 per cent.
Short "	2 or	1.04 " "

Treated with long splint	88
Treated with short splint.....	192

 280

The plan of treatment pursued in these cases had been rest in bed, usually with a blister behind the trochanter when the case was seen in the early stages, combined with traction in the line of the deformity with such weight as gave the greatest relief, while the body and sound limb were secured to a long splint passing from the axilla to the foot. In certain cases, lateral traction was also added. This was first used by Dr. Sayre in 1868. When the acuteness of the joint spasm had subsided, and the deformity had been overcome, the line of traction having been gradually changed until the limbs were parallel, the child was allowed to get up with the short splint and crutches in some cases, and in other cases with the long splint, either with or without crutches, according to circumstances. The author did not enter into the details of application, as these had previously been fully described. Cases involving both joints had been treated in the wire cuirass, as far as possible, in order to allow of driving in the sun and air. The limbs were occasionally removed from the cuirass, one at a time, for the purpose of making slight motion of the joint, inside the degree of causing pain. Traction was considered as one of the requisites of treatment, as the author had seen cases go on to extensive suppuration with entire destruction of the acetabulum, from reflex pressure, in spite of constant fixation by plaster of paris for two years without traction. He had also seen a case of ankylosis of all the joints of the trunk and lower extremities in a case that was kept constantly in a cuirass for nine months without motion. The ankylosis in this case was not accompanied by any fever or pain, so that the supposition that a rheumatic diathesis was responsible for this condition was untenable.

Cases of exsection had not been included in the table of statistics, as they had not been published separately, and most of them had been in such advanced stages when first seen as to preclude the possibility of mechanical treatment.

DISCUSSION.

Dr. Judson agreed with the writer of the paper that traction does not secure complete immobilization, but rather fixation, or a fractional and sufficient degree of immobilization. Fixation thus produced relieves pain and hastens recovery, but does not prevent the correction of deformity, which is brought about conveniently and surely, as soon as the patient, wearing the hip splint or the ischiatic crutch, is taught to observe habitually the natural rhythm of walking. Adduction and flexion are thus reduced because the limb reaches outward and downward in abduction, and extension in order to do its share of the work of progression which is thrown upon it by the footsteps are equalized. He had been pleased to find that not only is deformity reduced, but also the range of motion is increased in the joint when the limb is summoned in this way to do as far as it can its half of the work of locomotion.

Dr. Phelps said that while listening to the paper he had been impressed by the striking difference between the statistics presented by the author and those published a few years ago by Shaffer and Lovett, notwithstanding that all these gentlemen used the same plan of treatment. In 39 cases reported by the two last named gentlemen, 19 had ankylosis and 7 were in a condition almost equivalent to ankylosis. The author of the paper which had just been presented deserved to be congratulated on the large number of magnificent cures which he had obtained. The speaker admitted that he had become somewhat prejudiced against the long traction splint, partly as a result of experience, and partly because of the publication of the statistics which he had just quoted. Where ankylosis had occurred, he believed it was due to trauma, which had been produced by allowing the patient to walk upon the apparatus, or on account of a joint in the splint which allowed free motion, or because traction had not been made in the axis of the neck. He considered that the introduction of the long traction splint marked a distinct advance in orthopædic surgery, but he thought still further advance would follow attention to the points just mentioned, and it was on this account that he had adopted the plan of complete immobilization. The long traction splint was born of a fear of ankylosis, and a desire that the patient should have exercise, yet in his own experience, which embraced a large number of dispensary cases of the worst class, ankylosis had not occurred in a single one of the cases which he had treated during the past four years.

The members would doubtless recall the cases which he had previously presented, which, although completely immobi-

lized for periods of about one year, still had complete motion of the joint. He did not believe that fixation of a joint, either diseased or healthy, resulted in ankylosis. The fact that ankylosis was not a constant result of fixation proved this theory to be erroneous. The "ossified man," during the early stages of his disease, had been subjected to all sorts of manipulations, yet every joint became ankylosed. He believed the case of ankylosis reported in the paper was due to some affection of the nervous system, and was not the result of the immobilization. Ankylosis is determined by the character of the inflammation, its severity and duration, the parts involved, and the subsequent cicatricial contraction of the capsule of the joint, and he could not see how passive motion could prevent such destructive changes. The long traction splint, no matter how applied, will allow the foot to be elevated 35 deg. by tilting of the band at the pelvis. Although he had employed lateral traction at first without knowing that it had been used before, he had since found several references to it in literature, showing that it had been used many years ago by Busch.

While on the subject of the use of the long traction splint, he wished to call to mind the fact that cases of hip joint disease present great differences, and that some which run a favorable course are accompanied by much pain, while others which are associated with extensive destruction of bone have very little pain. He hoped that every one using the long traction splint would have as fortunate an experience as had the author, but for the present he felt that he must continue to use his lateral traction splint.

Dr. John Ridlon said that in a paper which he had written a few years ago on the subject of fixation and traction, he stated that as he had never met with a patient who had worn the short splint he thought this splint could not be used much in this vicinity. He wished to take this opportunity to say that since writing that paper he had seen three cases which had previously worn this splint. He had been especially interested in Dr. Sayre's statement that he had secured better results with this instrument than with the long traction splint. Some years ago, he had come to the conclusion that the long traction splint was positively harmful as a walking apparatus, as it seemed to increase "the pumping action" at the joint. That it should do so seemed reasonable, when one recalled the fact that with a traction of from five to ten pounds, and a splint weighing from six to eight pounds, the patient at each step stands upon the splint, lifting the well leg and relaxing all traction. The effect of this upon the joint can be easily imagined when it is remembered that a child running about takes two or three thousand steps an hour. That this splint does

exert a harmful influence in this way seems to be still further confirmed by the better results which the author had obtained from the short traction splint. As many of the cases had been treated at different times by both the long and the short splints, it was difficult to say how much of the good result was to be attributed to the one or the other splint. It seemed to him that some cases of hip joint disease seemed to recover no matter what the method of treatment adopted, or even when they were entirely untreated. We had not yet found out what was the essential vital principle in the treatment of each individual case. As an instance of this, he cited the case of a child whom he had treated most carefully for six years, and yet the result was not as good as in the case of a sister of this child, who had gone through the entire period of hip disease without any surgical treatment. It was true that some of his cases which should be on crutches were walking around on the limb, because he was unable to control them, yet he was free to admit that it did not seem to have hurt them.

Dr. Halsted Myers said that the majority of cases of tubercular osteitis of the hip have the primary local focus in the neck of the femur at the junction of the epiphysis and shaft. We can recognize this condition by appropriate tests, and, as at this stage there is no involvement of the cartilages of the joint, it is obviously unnecessary to immobilize the joint; yet it is *most important* that concussion and pressure should be taken from the inflamed and softened bone, and that there should be no possibility of the weight of the body being thrown on that limb. He believed that in a number of cases the disease never extends beyond this location, and is cured *in situ*. He had no pathological specimens to prove this point, nor has it been investigated as yet. He spoke from a clinical standpoint. In cases where there is erosion of the joint surfaces bearing against each other, he thought motion is injurious, as well as pressure, as is plainly indicated by the presence of reflex muscular spasm, which is a reliable guide. We always find reflex muscular spasm at the point where motion is injurious. On the other hand, immobilization of a disorganized joint *provided pressure is also relieved*, he had never seen to cause any permanent injury to the joint. To show the importance of the relief of pressure in this connection, he stated that in order to relieve pain he had had to apply traction to a case of hip disease which was wearing a Thomas splint, correctly shaped and applied. Recognizing the importance of this evidence, he had made repeated careful observations, but always with the same result, that traction was in this case necessary for the relief of pain.

Dr. H. W. Berg wished to protest against the feeling of

nihilism which might be engendered by Dr. Ridlon's remarks. If we were able to make a purely pathological diagnosis instead of a generic one—"hip disease"—we might be able to point out in advance those cases which would do well and those which would do ill.

Dr. W. R. Townsend said that while not wishing to detract in the least from the credit due the author for securing such excellent results, he desired to point out the fact that one factor contributing to this end was undoubtedly the very favorable surroundings of his patients. Again, the author could hardly have selected better cases had he desired to illustrate the traumatic origin of hip disease, and the fact of many of the cases reported having such an origin affords still another reason for the excellence of his results. Bone tuberculosis and an osteitis due to traumatism may give the same clinical symptoms, but they should give different ultimate results.

Dr. Judson said that for a number of years he had kept a description of all the hip splints he had applied, and their weight had ranged from one and one-half pounds, in the case of a child, to little over five pounds for a large adult.

He thought that some of us were dissatisfied with the hip splint, because we expect more than the nature of these cases allows. We can not cut short hip disease as we can break up chills with quinine. We must put the part and the system in the most favorable position attainable, and then wait for the processes of natural repair. This is best done by making traction so long as it is needed, and protecting the limb throughout the treatment from the traumatism of walking, while locomotion is freely practised. Traction and protection are the features of the American method, by which it is distinguished from the Liverpool method of portable leverage, and the London method of recumbent traction. The results obtained by Dr. Sayre are good, but not exceptional. They are within the reach of all who adhere to the plan of treatment which has been outlined.

Dr. R. H. Sayre said that the fact that one man regards a case as tubercular, and another as non-tubercular, did not change the character of the lesion nor influence the progress of the disease.

Regarding the question of the occurrence of ankylosis, he said that he believed some cases would become ankylosed whether motion was allowed, or entirely prevented, and as an illustration of this he recalled a case of double hip joint disease, in which the disease on one side was very severe, and was accompanied by extensive suppuration, while on the other side, it ran a much milder course. During the progress of the disease in the latter joint, she was kept in bed, or in a wire cui-

pass, yet notwithstanding this treatment, and the apparently mild course of the disease, absolute ankylosis was the result, while in the other joint, good motion was secured. Again, after the disease was apparently arrested in both joints, and both seem to be equally stiff, passive motion gave a good joint on the side which had suppurated, but resulted in no benefit to the other side. He had seen a number of cases of disease of both hips and knees in which the joints seemed to be perfectly fixed until passive motion was instituted. He did not approve of leaving these stiffened joints to be loosened up by the ordinary motions which the patient would make.

Dr. Phelps said he agreed with the other speakers as to the value of forcible breaking up of adhesions under ether, but he could not understand how motion of a joint during inflammation could *prevent* ankylosis. As the inflammatory material which limits the motion during inflammation is absorbed, there will be an increased motion of the joint, and in his opinion, active motion on the part of the patient was better than passive motion. He had frequently produced by passive motion a return of the pain and stiffness in the joint.

Dr. Townsend could not see how any one could believe that an osteitis due to traumatism represented the same pathological process as one due to tuberculosis, although the clinical symptoms might be identical.

The chairman said that while all must admit that the statistics presented in the paper are not only brilliant, but exceedingly valuable, in comparing them with the statistics of those who do not resort to excision of joints, allowance must be made for those joints which had gone on to excision. This would also affect the mortality. One point which was very strongly brought out in the paper was the positive, decided, and immediate relief of pain obtained in the majority of cases from traction properly applied. In hip joint disease, it is fair to infer, as is also evident from the results obtained, that if the pain is relieved the treatment is beneficial to the joint. He believed in the immobilization in the acute stage, so far as it could be produced by traction, but he did not believe it was necessary to go up to the axilla and immobilize the spinal column. Sometimes traction must be supplemented by recumbency, and sometimes by the use of crutches; these were all the necessary elements for the proper management of those cases which can be successfully treated by mechanical means. His own experience had led him to think that by far the most efficient method of applying traction was by means of the long traction splint.

Dr. Sayre, in closing the discussion, said that the statistics presented were only those which had been fully com-

pleted, and they represented forty years of work. He thought Dr. Phelps had misunderstood him about the question of motion at the joint. He had always advocated, repeatedly and persistently, rest of an inflamed joint, but he *permitted* such motion as the patient would himself make. He did not consider that any motion which would not cause pain was injurious. He applied sufficient traction to prevent pressure on the joint, and it was all-important that this traction should be made in the proper direction. He did not approve of an unyielding strap, which, in the splint used by Dr. Taylor and Dr. Shaffer, is attached to the pelvic band and the shaft of the splint; in his opinion it should be made of elastic webbing.

As regards the etiology of his cases, he did not pretend to say whether or not the processes were tubercular or non-tubercular. At the time he began his investigations everything was called "scrofula," and medical men believed that tubercle was always found in the lungs before it was deposited in other parts of the body. Having learned from autopsies on some cases of hip joint disease that there were no tubercles in the lungs, he began to doubt the tubercular nature of this disease, and he was led to look upon it as a chronic inflammation, resulting from a greater or less degree of traumatism. Now that the presence of the tubercle bacilli furnished a definite basis for a diagnosis, he was trying to learn something about the occurrence of tubercle in these cases. Clinical experience had taught him, however, that whether these cases were tubercular or not, fresh air, good food, and freedom from pain were the essentials for a cure.

Referring to the occurrence of ankylosis, he said that one single case of absolute, firm ankylosis of all the joints in the body was worth more to him than any number of experiments on dogs. In the case which he had reported in his paper there was no fever, no evidence of any nervous derangement; in fact, there was no constitutional disturbance. To apply a splint without traction is wrong; nothing makes better immobilization than plaster of paris, and it is much more comfortable than the Thomas brace, yet it is insufficient without traction to overcome the reflex muscular contraction and to relieve pain. The treatment which he advocated was the best possible one, no matter what the etiology of the disease.

Dr. John Ridlon exhibited a convenient pocket knife, with blades especially designed to facilitate the removal of plaster of paris bandages.

SECTION ON ORTHOPÆDIC SURGERY.

Stated meeting May 20, 1892, Henry Ling Taylor, M. D., chairman.

CONGENITAL DISLOCATION OF BOTH PATELLÆ.

Dr. S. Ketch presented a little girl, who, at first glance, seemed to have only knock-knee, but on flexing the limbs, a complete dislocation of the patella, downward and forward, was observed, and the dislocation could be readily reduced by extending the limb. The deformity was much more marked on the right side. The condition was probably congenital, although it had not been noticed by the mother until recently, as the child was able to walk with no more difficulty than is observed in an ordinary case of knock-knee. Dr. Shaffer had suggested that this was the opposite of the condition which he had described under the head of elongation of the ligamentum patellæ, at the last meeting of the American Orthopedic Association.

Dr. John Ridlon said that he had seen three such cases in the practice of the late Mr. Thomas. The treatment had consisted in hammering the deficient condyle with an egg-shaped wooden mallet, and in two of the cases the treatment had already effected sufficient development to prevent dislocation, and in the other case the treatment had only just begun.

Dr. W. R. Townsend said that he had presented some time ago to the Surgical Section of the Academy of Medicine a colored girl, who could, by muscular action, produce at will a complete dislocation of both patellæ, either to the outer or inner side. A knee-cap was applied, and an effort made to restrict the movements of the fibres of the vastus externus and internus, which seemed to be abnormally developed. She was kept under observation for six or eight months, and at the end of this time she could not produce the dislocation at will, and the dislocation occurred quite infrequently.

Dr. N. M. Shaffer said that in his case of elongated ligamentum patellæ, the man had had a fall which was followed by an outward dislocation of the patella on the right side. After consultation with several other surgeons, in view of the fact that the intercondyloid notch was filled by an exostosis, it was considered best to make no attempt at reduction, and at present, although the patella lies on the outer aspect of the joint, the man is perfectly able to walk ten or fifteen miles a day. In the case just presented, he did not think the external condyle was deficient, but the ligamentum patellæ was so short that the patella instead of passing over

the trochlea, is drawn down to a point where, owing to the knock-knee, it is very easily dislocated. On this account, he thought that treatment directed toward securing an elongation of the ligament would be more apt to prove successful than simply hammering the outer condyle.

Dr. Ketch, in closing the discussion, said that he agreed with the last speaker as to the inadvisability of resorting to operative measures. Not long ago he had seen a young lady with a somewhat similar condition. Twelve years before the patella had been dislocated by muscular action, and this had again occurred shortly before he saw her. Reduction was easily effected by extending the limb.

Dr. Royal Whitman presented several patients.

Case I.—A girl, fourteen years of age, to illustrate the appearances in non-deforming club foot. As in many similar cases, the history was one of awkwardness in walking for many years, with increased pain and discomfort during the past six months. She presented the calluses on the balls of the feet, the contraction and tenderness of the plantar fascia, and the limitation of dorsal flexion to which Dr. Shaffer had called attention in his original communication.

Case II.—A woman, fifty-seven years of age, who had suffered from chronic rheumatism for many years. On the left side, the contraction of the plantar fascia had thrown the foot into a position of equino-varus. There was no deformity of the right foot, but on both sides a well marked limitation of dorsal flexion. The electrical reactions were normal. The condition was similar to non-deforming club foot, and was apparently the result of a rheumatic inflammation.

Case III.—A girl of fourteen, with marked spasmodic flat foot. The case was presented to illustrate the extreme and progressive deformity and disability in this class of cases, which could be easily and quickly relieved by the method of treatment to which he had on several occasions called the attention of the society.

Case IV.—A girl of eighteen, with persistent abduction of the right foot. Although there was no evident deformity, the foot was held in an abducted position by spasm of the peronei and extensor longus digitorum muscles. The condition was the result of a slight sprain three months before. The symptoms were: Pain, fatigue and insecurity in walking. The case illustrated the condition in so-called chronic sprain of the ankle, which practically never recovered, because the foot, being unbalanced by irregular muscular action, was constantly subjected to injury. When the condition was recognized a cure could easily be accomplished by restoring the normal

muscular action. The patient being etherized the foot should be forced into a position of extreme equino-varus. All adhesions were thus broken up, and the contracted muscles were stretched. The foot was then placed in plaster of paris, and later, by massage, exercises and a temporary support, the patient could be completely and permanently cured.

Dr. R. H. Sayre thought that in the fourth case there might have been a fracture of the lower part of the fibula, complicating the sprain, which had been overlooked in the treatment of the case immediately after the injury.

Dr. Ketch thought that the fourth case gave evidence of a possible osteitis about the ankle joint, and this condition should be carefully excluded before adopting the treatment proposed.

Dr. Whitman said that he found no indications of an osteitis in the fourth case, and that there was no history or present indication of fracture complicating the original sprain.

Dr. Shaffer said of the second case, that the exaggerated extension of the toes and the shortened plantar tissues were characteristic of non-deforming club foot. He had seen several cases where the symptoms had not become prominent until the age of thirty-five or forty years was reached, and then, whether there was a rheumatic diathesis or not, all the symptoms would be greater exaggerated. Many cases showed much less deformity than that exhibited in Dr. Whitman's case. The typical non-deforming club foot showed little or no deformity as such, unless it was sought for and found in the shortened plantar and post-tibial tissues. The lack of proper length prevents normal antero-posterior movement at the ankle, and in the tarsal joints, and the entire weight of the body falls upon the "ball of the foot" in locomotion. It is far more common than is generally supposed, and with the use of the antero-posterior traction shoe, there is no necessity whatever for a division of the resisting tissues.

Dr. R. H. Sayre thought the second case presented very much the condition found in ordinary cases of chronic gout and rheumatism, and he had noticed that after the foot had been manipulated somewhat, she was able to move it much better than before, and could voluntarily flex the ankle beyond a right angle, so that it did not seem to be a case of non-deforming club foot.

ANCHYLOSIS OF THE HIP.

Dr. Irving S. Haynes, present by invitation, exhibited a specimen of this condition which he had found in the dissecting room of the University Medical College. The subject was a man about 25 or 30 years of age. The limb was slightly

flexed, adducted and rotated inward. A sinus opened about half an inch below Poupart's ligament, and one inch internal to the anterior superior spinous process. It passed backward, soon divided into two tracts, one leading down to the front of the great trochanter, the other up under Poupart's ligament into the iliacus, and then into the obturator internus muscles; then around the middle of the outer border of the obturator foramen into the cotyloid notch, and so into the hip joint. The iliacus and obturator muscles, as well as all the muscles acting upon the hip joint, had undergone extensive absorption and fibrous degeneration. The centre of the disease and the starting point seemed to have been in the head of the femur, but there was also a focus in the epiphyseal line of the great trochanter, which communicated with that found in the head of the femur by a sinus running through the neck, and also opened in front through one or two small openings. Another sinus seemed to have led from the acetabulum through the cancellous portion of the ileum into the iliac fossa, where the opening was surrounded by bony formations. Between the ileum and sacrum there was slight mobility of a gliding nature which the speaker had never observed before, and which was probably intended to partially compensate for the lack of motion at the hip. There was no evidence of the disease in the capsule of the joint. The abscess cavities were limited to the absorbed portions of the iliacus and obturator internus muscles.

ARTHRITIS DEFORMANS.

Dr. Haynes also exhibited a specimen of this condition, showing erosion and reproduction of bone, with a depression in the acetabulum, and a disappearance of the ligamentum teres. The motions of the joint were slightly limited in every direction. The specimen was removed from an old subject.

THE TREATMENT OF LARGE ABSCESSES IN POTT'S DISEASE.

Dr. W. O. Plimpton presented several cases of Pott's disease with large abscesses, as an illustration of the treatment which he advocated. He did not favor aspiration, because he thought, after this had been done, the abscesses were likely to continue to enlarge and burrow into the tissues. While admitting that abscesses were not infrequently absorbed, he wished to deprecate the let-alone treatment of large abscesses which tend to burrow deeply into the tissues, threatening to inoculate these tissues, often causing mechanical deformities of other parts.

The first case was a boy about twelve years of age, who

had had Pott's disease since he was three years old. The disease followed closely upon a blow from a brick. When he first came under the speaker's care last July, he was very anæmic and weak, with an afternoon rise of temperature. There was a very large abscess situated beneath the glutei muscles, and there was much deformity of the leg, viz.: apparent shortening, inward rotation, and adduction, caused by the abscess. Free incision evacuated a large quantity of fluid, together with broken-down tissue. An examination with the finger showed no involvement of the joint. The diseased parts were thoroughly curetted with a Volkmann spoon, a counter-opening made, and three drainage tubes inserted. After washing out the cavity with a weak bichloride solution, the superficial cavity was obliterated as far as possible by means of sutures, and primary union occurred except at the site of the drainage tubes. Two of the tubes were gradually withdrawn. The third one, in front, still remains in for drainage, although it has been considerably shortened. The apparent inequality in the length of the limbs has disappeared since the operation, and with a plaster jacket to support the spine he is able to go to school, and to play with other children. The discharge is steadily becoming less.

The second case was a girl, seven years old, whose disease dates back to a fall about three years ago. When first seen, one year ago last January, there was a moderately large abscess, which was opened and a tube six or eight inches long inserted. The tube has been gradually shortened until it is now three inches long; the discharge is diminishing, and the patient's general health has markedly improved. Another case was treated in a similar manner, and has steadily improved since the operation. In all there had been a gradual reduction of the temperature after the operation. The same precautions were observed as in any cutting operation where it is the intention of the surgeon to secure primary union, and after the operation care was taken to keep the wound and dressings aseptic.

Dr. W. R. Townsend said that the location of the tube in the first case reminded him of an accident which occurred about one year ago. He was hastily summoned to the hospital on account of one of the patients having a hæmorrhage. He found that a case of large psoas abscess which had been opened and a drainage tube inserted, three weeks before, had suddenly begun to bleed profusely. The hæmorrhage was arterial, and with the assistance of Dr. W. T. Bull, he cut down and found that the pressure of the drainage tube had caused a large perforation in the femoral artery. He accord-

ingly tied the artery above and below the perforation, and the child recovered without further accident.

Dr. Ketch thought the cases presented very much the appearance of those which he had seen in the hospital when it was the rule to open all abscesses as soon as the abscess approached the surface. They did not seem to him to differ materially in their course from those where the abscesses were allowed to open spontaneously, and he could not see that anything had been gained by this method of treatment.

Dr. Ridlon asked if the drainage tube had been left in for so long a time for fear that the opening would close up, and necessitate another operation. He had always thought that it was not necessary to leave in the tube more than a few days.

Dr. A. M. Phelps thought that the second case had had a decided advantage over the first in being subjected to the operation at a much earlier stage. The slightest increase in an abscess, in his opinion, warranted prompt incision. He spoke emphatically because the section had almost been committed to the idea that it was better for these abscesses to take care of themselves. But it must not be forgotten that these abscesses were originally collections of tuberculous material, and that when they became infected with pyogenic germs, as almost inevitably occurs, there will be a rapid burrowing of the pus. Another reason for opening these abscesses is that they exert an injurious effect by the internal pressure of the exudate upon the carious foci in the diseased vertebræ, keeping them bathed constantly, and furnishing a fertile source of the subsequent breaking down of these vertebræ, and of a consequent increase in the deformity.

Dr. Ketch thought that the previous speaker had not correctly stated the position of the section on this subject. He thought it would be more correct to say that they took the ground that so many of these abscesses disappeared spontaneously under proper mechanical treatment, that something more than mere accident was necessary to explain it, and that these collections of pus cause injurious pressure had not been proven. The proof of this would be found in a marked increase in the size of the deformity, but in the disease of the dorso-lumbar spine, where these abscesses were the most frequent, this did not occur, and Dr. Myers had recently presented a boy who had had two large iliac abscesses disappear spontaneously, and yet there had been no increase in the kyphos as shown by repeated and careful tracings.

Dr. Shaffer said that extensive observation had taught him that, with efficient mechanical treatment, the abscesses

of Pott's disease almost uniformly pursue a benign course, and he believed that the time would come when those who now operate will see their error. He had seen in the practice of some of the best surgeons in this city deaths occur after operating upon just such abscesses. When an abscess is very tense, and there are severe local or constitutional symptoms, all recognize the propriety of incision, but ordinarily, these abscesses are flaccid, and do not cause any such "damming up" and injurious pressure as had been described by Dr. Phelps.

Dr. Whitman could see no good reason for waiting until the abscesses appeared below Poupart's ligament. When first discovered, they should be aspirated, and if this fails, iodoform emulsion should be injected. Surely, a method of treating the abscesses of Pott's disease, which yielded in the hands of Bruns fifty successful cases out of fifty-two, and of Fraenkel, eighteen out of twenty, was one which deserved a fair trial before resorting to severer measures. If aspiration and the injection of iodoform emulsion proved unsuccessful, the method of evacuation recommended by Barker and Treeves, with immediate closure of the wound, might be employed before resorting to open drainage.

Dr. Plimpton, in closing the discussion, said that the tube had been left in for free drainage, as it had been found that, where it was removed shortly after operation, the exuberant granulations choked up the sinus, and gave rise to a great deal more trouble and discomfort than where the tube was retained. At the time of the operation, he had had in mind the possibility of accident from having the tube in too close proximity to the femoral artery, and in this particular case there were dense cicatricial barriers between the tube and the artery. Small and not readily accessible abscesses should not be interfered with unless they cause some disturbance, but he would not hesitate, if circumstances seemed to demand it, to open them above Poupart's ligament. The existence of intra abscess pressure, and its effect upon the general health, was well demonstrated in one case in which he removed about half a pint of the contents of the abscess by aspiration, with the result of causing an immediate return of the child's appetite, and a prompt relief of his pain. He had seen the iodoform emulsion used in a number of instances without apparent benefit. In considering the percentage of abscesses which disappear spontaneously, it must be remembered that many of them are small abscesses, or are nothing but fluid in the joint, so that the statistics on this point were very defective.

A CONTRIBUTION TO THE STUDY OF NON-DEFORMING CLUB FOOT.

Dr. L. W. Hubbard read a paper with this title.

DISCUSSION.

Dr. Phelps objected to the name, "non-deforming club foot," on the ground that all cases he had seen presented deformity.

Dr. Shaffer said that when he first called the attention of the profession to this subject, this name had suggested itself to him, because all the conditions of club foot were present except the deformity, which was so slight that it had hitherto escaped observation.

Dr. V. P. Gibney said that the condition described some years ago under the name of metatarsalgia might be confounded with non-deforming club foot. These patients usually complain of pain after sitting for some time, as in the theatre. He had treated a few cases of non-deforming club foot by division of the tendon and plantar fascia, over-correction and retention in this position by plaster of paris for a period of several weeks, and he had not been obliged to resort to extension subsequently. So far as he knew these cases had not relapsed.

Dr. Shaffer said that in a series of [twenty-two cases of metatarsalgia, he had relieved over one-half by the antero-posterior traction shoe alone. The inability to flex the ankle joint brought the maximum pressure at the point of irritation, and hence, by producing a certain amount of forcible flexion at the ankle joint, the pressure was brought upon other parts, thus removing the constant irritation, which he thought was the chief etiological factor. He had permanently and completely relieved marked cases of non-deforming club foot within one week by three or four applications of his traction apparatus. In some cases deformity can be reduced at one sitting, but the muscles recontract slightly, necessitating a more prolonged treatment. He did not believe that tenotomy was necessary in any case of non-deforming club foot.

Dr. R. H. Sayre had found many cases of metatarsalgia to be dependent upon irritation of the pelvic nerves, and such cases had been relieved by galvanism, with one pole over the sacrum and the other over the ovarian region. In the treatment of non-deforming club foot, he sometimes employed stretching, and sometimes tenotomy, depending upon the nature of the case. If the tendo Achillis or plantar fascia gave a reflex spasm when stretched to its utmost while joint pressure was applied, his experience had been that tenotomy was

necessary. If no reflex spasm was produced, the contracted tissues could be stretched.

Dr. Ridlon asked if the author considered the woman exhibited by Dr. Whitman to be a pure non-deforming club foot, and whether he would expect to fully relieve the disability and restore the full flexion by the use of a stretching apparatus.

Dr. Halsted Myers reported a case of non-deforming club foot in a man, thirty-eight years of age, in which the etiology was unknown. The symptoms were unusual, in that, although the ankle flexion was only stopped at 95 degrees, the principal complaint was that the knee could not be fully extended. The patient also felt that he could not fully extend his thigh without much more effort than on the other side, and also felt that his pelvis was tilted up posteriorly. The man knew nothing of anatomy, yet these symptoms were reasonable, theoretically, for shortened gastrocnemii might cause knee flexion, and this, in turn, thigh flexion, and this, again, tilting of the pelvis up posteriorly. The shortening of the gastrocnemii was the only deformity apparent, yet the subjective symptoms were so annoying that the patient himself proposed forcible extension and fixation in bed, for months, even, if necessary.

Dr. H. W. Berg said that he had seen many of the cases on which Dr. Shaffer's first paper was based, and not a little credit was due to him for having distinguished these cases from those of chronic rheumatism. Most of those described in the paper of the evening had been so quickly relieved that he was inclined to think they were not congenital, for, after such a condition had lasted for many years, it did not seem reasonable that they should be relieved by one or two stretchings.

Dr. Hubbard, in closing the discussion, said that he had never seen a case of non-deforming club foot which he thought would consent to an operation for the relief of the difficulty, as the patients did not ordinarily consider it of much importance. Nor could he recall a single case which had not been materially relieved after one or two stretchings, except in those which were rheumatic.

In answer to Dr. Ridlon, he would say that he considered the case presented by Dr. Whitman a typical one of non-deforming club foot of a rather pronounced type, but he had seen as bad, and even worse cases, relieved by persistent stretching. The treatment was prolonged in some instances by the re-contraction of the muscles, but just as india rubber yields after a certain number of stretchings, so these cases will be permanently relieved after the continued use of the traction shoe. In

the case referred to in this paper, the condition had lasted for a long time, and the muscle was well developed, and the time of treatment was still further prolonged by the patient's intolerance of the stretching.

A NEW APPARATUS FOR OVERCOMING THE ABDUCTION OF THE THIGH IN HIP JOINT DISEASE.

Dr. Newton M. Shaffer exhibited a new apparatus which he had devised for the purpose of overcoming the abduction of the thigh in hip joint disease, and at the same time avoiding the infliction of any traumatism upon the joint. It consisted of a thoracic attachment to the ordinary long hip splint, with an arrangement of curved levers actuated by a key, by which motion is imparted to the limb in a direction downward and inward, instead of, as in other instruments of this class, inward and upward. This is the chief feature, and it is on this account that traumatism is avoided. It can be attached to any ordinary long traction splint, and, like the thoracic part, it is to be used only as a temporary arrangement for reducing the deformity.

Dr. Phelps said that he was glad to see that Dr. Shaffer had come to recognize the fact that we can not act upon the hip joint with any degree of precision without taking hold of the thorax; but he failed to see any necessity for such an apparatus in our armamentarium, as his lateral traction splint did the same thing, and no case of hip joint disease need recover with angular deformity. Since he had devised and made use of his lateral traction fixation splint, which acts on the same principle as the apparatus just exhibited, he had not seen a case in his practice of angular deformity. If such a thoracic splint be applied after the deformity has once been overcome, recovery must take place without angular deformity.

Dr. Shaffer explained that the apparatus he had just presented was intended only as a temporary apparatus for overcoming persistent abduction of the thigh, and he considered it a very serious mistake to use the thoracic attachment in the ordinary treatment of hip joint disease, because it limited the motion of the spinal column, and this would necessarily increase the strain upon the diseased joint. It was for this reason that he had discarded the thoracic addition to the hip splint many years ago. The idea of his new apparatus is to provide a temporary means of overcoming abduction, and it is only to be worn long enough to accomplish this purpose, and then it is so arranged that the abduction and thoracic portions can be readily removed, leaving the ordinary hip

splint, which permitted a free movement of the dorso-lumbar spine, and thus diminished the traumatism at the hip, which is best shown when a patient with hip joint disease and dorso-lumbar caries attempts locomotion.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

THE TREATMENT OF LEG ULCERS.

By THOMAS S. K. MORTON, M. D., Professor of Surgery in the Philadelphia Polyclinic.

It is not my object upon this occasion to describe or even mention every method that has been employed in the treatment of leg ulcers, but to present a method of dealing locally with these usually troublesome disorders that has come to be a routine practice in my hands and in those of a number of my students. As my opportunities for investigation and experiment in this direction have been unusual in extent—notably at the Polyclinic Hospital—and as the method to be described has been employed with ever-increasing satisfaction during the past few years in the treatment of a very large number of cases embracing almost every possible type and variety of ulceration, I can commend it with confidence, feeling sure that those accustomed to the usual methods of treatment will under its use find their results in astonishing contrast both as to the comfort of the patient and in the rapidity and certainty of healing.

THE DRESSING.—The method, is as follows: The surroundings of the ulcer or ulcers are thoroughly cleansed with soap, brush and water, and, if necessary, shaved. The soap-suds are then washed away with simple water, and the parts douched with 1:1000 sublimate solution if the ulcer is foul, inflamed, or otherwise manifestly septic. If these conditions are absent, the bichloride may be omitted. Next, the ulcerated surfaces are subjected to the powerful but harmless antiseptic action of a spray of full strength (15 volume) peroxide of hydrogen solution. Pouring on of the agent is almost as efficient, but very wasteful. If the spray is employed, however, it is essential to use an atomizer of which every part is made of hard rubber, as the powerful oxidizing qualities of the solution will almost immediately destroy any metallic parts with which it may come in contact. The ulcer having been thus sprayed until active effervescence ceases is then gently washed off by a stream of simple water, or by a pledget or mop of absorbent cotton saturated with the same. This carries away all detritus loosened up by the action of the peroxide. Next, the ulcerated area and one inch of the unaffected surrounding skin are covered in with strips of “Lister protective,” one-half

inch broad, overlapping each other about an eighth of an inch. The "protective" should be that made of very fine silk fabric coated on both sides with a mixture of copal varnish, dextrine and carbolic acid, after the original formula of Lister, and supplied by the manufacturers of antiseptic goods.

Our object in using the protective is to keep the ulcer moist, to prevent friction and irritation at all times and the tearing away of reparative material at dressings, as well as to furnish a guide to the epithelial cells in their excursion across the granulations. It also acts as a capillary drain, carrying the secretions drop by drop to the edge of the strips, where a suitable dressing absorbs and sterilizes them. The strips of protective should first be soaked in strong (1 : 1000) bichloride solution, and then washed in simple or cold boiled water before being applied to the wound; this precaution being necessary, as the strong antiseptic probably kills or inhibits the growth of new-forming granulation and epithelial cells, and thus retards healing. Protective quickly spoils in solution, so that it must be sterilized immediately before using.

A dressing of gauze or butter-cloth, which has been wrung out of 1 : 1000 sublimate solution, and folded in six or eight layers large enough to overlap the protective strips several inches in all directions, is then neatly put on without creases or other irregularities. This serves to absorb and disinfect the discharges that may be transmitted into it from beneath the protective. Experience in each individual case will determine about how many thicknesses of gauze will be required for this purpose; but the less used, consistent with attaining the object desired, the better.

Finally comes the bandage. This is to keep the dressing in place, give the vessels support, and to prevent or relieve œdema. Few things are more unsatisfactory than the ordinary leg bandage that is put on with reverses up the leg, especially where the patient is compelled to stand and work upon the member during the progress of treatment. No matter how expertly it may be applied, the ordinary bandage will in a few hours or even minutes after its application be found in festoons about the ankle. On the other hand, a bandage that I have been using for the past five years will not only remain just as applied for days or even weeks and be absolutely comfortable to the wearer, but also permits the employment of the fixed antiseptic dressing for leg ulcers while the patients pursue their usual occupations—no matter how arduous—almost unconscious that their formerly disabling disease is still present.

This bandage is applied to the foot and ankle in the usual manner until that point immediately beneath the calf is reached,

where reverses would usually be begun. Here, however, the difference becomes apparent; no reverses are made, but the two edges of the bandage are kept equally tight, and it is thus wrapped around the limb, practically allowing it to guide itself, the surgeon only being careful to keep the edges of the roller equally tense as it unwinds. Thus it will be found that the bandage will mount upward around the calf in a spiral manner, take a circular turn around the leg just below the knee, then descend again by a downward spiral around the calf, again mount upward as before upon the opposite side, slightly overlapping the previous turn, and so on until finally the leg will become enveloped in a bandage that might be called a figure-of-eight of the calf. It should be put on as tightly as the patient can comfortably bear, smoothly, and care should be taken that no points are left without being supported by at least one of the turns. A muslin roller, six yards long and three inches wide, will be found about the proper dimensions for this bandage.

This method of giving support to the circulation of a leg is equally applicable even after the ulcer has been cured, or where swelling or varicosity exists independently of ulceration. Patients can be readily taught how to apply it, and usually give it preference to elastic stockings or rubber bandages. My experience with these latter has not been favorable; the stockings are very good when new, but soon decay, stretch and become useless as a support, while the rubber bandage retains perspiration and often gives rise to intense irritation. Not every patient is capable of wearing either, and all, in my experience, much prefer the bandage that has been described when it is properly applied. A bandage of German manufacture can now be purchased, in which fine rubber threads run in the length of cotton webbing, which can be similarly applied, and is very comfortable and satisfactory. However, it is not cheap and is prone to decay.

REDRESSING.—Until the parts have been rendered odorless, free from all irritation, and aseptic, it is advisable to redress the leg in the same manner every day, or at furthest every other day; also, until these conditions have been secured, to use the bichloride of mercury solution as a douche. When, however, asepsis has been attained, strong antiseptics should be discarded in redressing, as they retard healing; simple water is then to be used instead. Subsequently the dressing should be renewed every second day if the person is using the extremity, but if he is in bed, dressings need not be renewed so frequently after the discharges have become scanty.

In this, as in every other method of treating leg ulcers, if the patient will consent to remain in bed or reclining, healing takes place very much more rapidly, but under the present system the number of instances where confinement is *essential* for healing is exceedingly small.

With this protective and gauze dressing, I believe that nature's method of healing is best assisted, and that under the conditions of moderate moisture and freedom from irritation—both traumatic and septic—is secured as rapid healing as can ever be anticipated. As I never expect surgery to evolve a method of uniting simple fractures more rapidly than at present, neither can I look forward to the cure of the great majority of leg ulcers more rapidly than under the favored dressing—that is, they fill up to the level of the skin and are covered over with epithelium without waste of reparative material just as rapidly as nature can possibly furnish it; the time required usually being incredibly short.

EXCEPTIONS.—For clinical and remedial purposes it is my custom to divide all leg ulcers into the following classes:

1. Simple.
2. Syphilitic, diabetic, nephritic.
3. Tubercular.
4. Malignant (principally epitheliomatous degeneration of others).

To all these the above local treatment is applicable, except certain cases of Class 3 and all of Class 4, which require excision by the knife, with subsequent suture or grafting, by Thiersch's method, or possibly amputation.

Syphilitic ulcerations require in addition to the usual local treatment some form of anti-specific medication. For this purpose I have employed the following mixture with great satisfaction:

R	Podargyri bichloridi.....	gr. j.
	Potassii iodidi.....	3vj.
	Syr. sarsaparillæ comp.....	q. s. ad $\frac{3}{4}$ iv.—M.

S.—Teaspoonful after meals.

MODIFICATIONS—Where pus or other discharge from an ulcer is excessive, it is well to dust on the merest pinch of iodoform or aristol before applying the protective; or, what is equally effective, paint the ulcer with the pyoktanin pencil.

If granulations are slow in forming or flabby, it is wise to paint the surface at each dressing with nitrate of silver solution (15 grains to 1 ounce of water), or, if greater stimulation is necessary, to scarify the ulcer and its surroundings by superficial rapid strokes of the heel of a blunt tenotomy knife or otherwise. The pain resulting from this little operation, while

not severe, yet may be obviated by allowing a pledget of absorbent cotton saturated with a 5 per cent. cocaine solution to remain in contact with the surfaces for five minutes before applying the scarificator.

Exuberant granulations can most readily be removed by light parallel strokes of a fine-pointed pencil of nitrate of silver, or by scarification as above.

If the area of the ulcer be large, and the granulations are level with the surrounding skin and healthy, skin-grafting may be employed. This may be undertaken by the usual methods, or by one that I have found quite as satisfactory, based upon the practice of horsemen, who, by shaking epithelial scales from the curry-comb upon ulcers in the horse, are usually able to cure them in a very short time. So, gently scraping up a little mass of the swollen, softened, and aseptic epithelium from skin that has been under the protective just outside the limits of the ulcer, it is gently spread over the granulations. A number of these cells will generally be found to have taken root as grafts in various parts of the ulcer at the next dressing, and will wonderfully hasten its final closure.

If healing of an ulceration is retarded by the presence of sloughs—and sloughs are very slow to separate in the absence of an active suppurative process—it may be expedient to hasten their separation. If already loose at the edges, they may usually be dissected off without pain by scissors and forceps. Otherwise, the best plan is to digest them out by means of pepsin or papoid. When pepsin is used for this purpose I build a retaining wall of tough cerate about the ulcer, and then pour into the little reservoir thus obtained enough of the following pepsin solution to cover the ulcerated area:

℞ Pepsin pure.....	gr. i.
Water.....	℥j.
Hydrochloric acid.....	Mj.—M.

Allowing this to act for about an hour, occasionally renewing the solution, the slough will as a rule be found almost or quite digested and liquefied, or so loosened up as to be readily removable by scissors and forceps. But much more convenient than this will be found the dusting of a minute portion of papoid or vegetable pepsin beneath the protective strips and allowing it to act until the limb is redressed next day. This succeeds well, because papoid acts best in a concentrated medium of any reaction whatever—pepsin only in a dilute acid solution.

Where the cellular tissue or lymphatics have become infected by septic material transmitted from a foul ulcer; or a phlebitis, acute or chronic, has been similarly originated, I

frequently apply immediately over the strips of protective (here omitting the gauze) a sheet of lint large enough to cover in the entire affected area, and spread with an ointment composed of—

Ichthyol ammoniat.....	20 parts.
Lanolin.....	80 parts.

Heavy wax-paper is put over this, and the usual bandage applied.

Ichthyol thus combined acts as a most powerful absorbent, lymphatic and circulatory stimulant, and antiseptic. So also this application will be found very useful applied over the protective strips when ulcers are complicated by eczema or great induration and infiltration of surrounding tissues. When the affected area has been covered in with the ichthyol for a few days under a firm bandage, most of the infiltration will usually have disappeared, and the gauze dressing can be applied over the protective. Since learning the value and power of ichthyol, I have had practically no use for plaster straps in treating even the most indurated leg ulcers.

Where ulcers are associated with excessive varicosity of veins, the question of proper treatment for the dilated vessels will arise. Any varicose condition of the leg can be kept entirely under control and the patient comfortable and able to follow his avocation by means of the bandage that has been previously described, provided, however, that the dilatation does not extend above the knee. But if the veins of the thigh are also involved, there is no method of giving them adequate support, so that if they are very troublesome, excision *en masse* is the only available resource. Of course, varices or isolated veins below the knee can be likewise dealt with, if such radical treatment for any cause (such as constant recurrence of ulceration) be considered advisable. I have recently had several cases in which I had recourse to very extensive excision of varices of the thigh and isolated veins of the leg with the most satisfactory results. These I expect to present in detail in a future communication.

DISCUSSION.

Dr. M. B. Hartzell—I have had a great deal to do with leg ulcers such as have been described, and have employed the treatment which Dr. Morton suggests, but my experience does not lead me to the same conclusions. I have found that the application of the so-called antiseptics has been followed by more or less inflammation. These agents are irritants, and as chronic ulcers are so often the result of eczema, the use of peroxide of hydrogen, bichloride of mercury and iodoform often has the effect of increasing the eczema. A large pro-

portion of leg ulcers are painful. The application of antiseptic solutions not only increases the pain, but at times renders it unbearable. I have in mind numerous cases where the pain was so great that even the mildest remedies could not be tolerated. In such cases the application of antiseptic agents is not admissible.

I have heard with some surprise that tubercular ulcers can be transformed into simple ulcers by the application of sulphate of copper. If this be so, it is certainly a marked advance in the treatment of tuberculosis. In the treatment of syphilitic ulcers, I know of nothing better than the application of mercurial plaster. Under this the syphilitic ulcer rapidly heals. A large proportion of leg ulcers can be cured within a reasonable period only by putting the patient to bed. If this is not possible the treatment must be prolonged. Perhaps my experience has been singular, but I still have to repeat that I believe that there is a large proportion of ulcers in which the application of such agents as bichloride of mercury, peroxide of hydrogen, etc., is not admissible can not be employed without causing more pain than the patient can tolerate.

Dr. Lewis H. Adler, Jr.—I have been greatly interested in the paper just read; the prevalence of leg ulcers, and the annoyance they occasion, makes the careful consideration of their treatment of much importance. During my term of service as resident physician at the Episcopal Hospital, I saw a large number of cases of leg ulcer.

In dealing with these cases nearly as much importance was attached to the constitutional indication as to the local treatment; and particular attention was paid to maintaining a healthy action of the liver and bowels. The state of the kidneys and the condition of the uterus was investigated; and the history as regards syphilis, gout, scrofula, etc., was inquired into.

The local treatment, in the majority of instances, consisted of the application of antiseptic dressings (bichloride of mercury, weak solution; iodoform; aristol; alcohol; peroxide of hydrogen, etc.), and the use of a roller bandage. The proper method of using the bandage seems to me to exert a most potent influence upon the success of any plan of treatment adopted for the cure of the affection under consideration. My invariable plan was to carry it forward to the base of the toes, and up as high as the knee, making the reverse turns as needed to cause the bandage to fit closely and equalize the pressure throughout. When it was found desirable to have the roller left on for some days the patient was instructed to "baste" the sides, or else to wear a cotton stocking, which was not to be removed at night.

I kept accurate notes of the cases, and in most instances we had satisfactory results. So far as I am able to learn the patients suffered very little pain. At least there was no complaint made of such suffering.

ENTERECTOMY FOR OBSTRUCTIVE EPITHELIOMA.

Dr. J. M. Barton exhibited a patient on whom he had performed an enterectomy for obstructive epithelioma five years before, and remarked that he did so for three reasons: First, as a permanent recovery from intestinal cancer. It is now nearly five years since the operation, and she is in perfect health. Secondly, to exhibit the apparatus which she wears on the intestinal fistula. Thirdly, to show the results, and to recommend the wider use of the method employed to re-establish the intestinal channel, particularly in cases of high obstruction.

I have opened the abdomen of this patient three times. First, on May 2, 1887, by a median incision, for severe recurring attacks of obstruction, which had lasted a year. An intussusception with adhesions was found, with a closely contracted ileo-cæcal valve at its apex. The intussusception was reduced, the colon opened, and the valve exposed and dilated. Some months later the symptoms of obstruction returned, and on November 1, 1887, six months after the first operation, I again opened the abdomen, this time by an incision similar to the one we now use for appendicitis, and found an epithelioma at the ileo-cæcal valve, nearly filling the entire caliber of the bowel. I removed three inches of the intestine, including the diseased portion, and immediately introduced Dupuytren's enterotome into the ends of the remaining bowel, viz.: one blade into the ileum, and one blade into the cæcum; the two blades were then brought together, and the screw run down firmly, a heavy ligature being then placed around the two ends of the bowel, including the enterotome, to prevent the escape of fæces during the subsequent manipulations; after the abdominal wound was closed, this ligature was cut. In eight days the enterotome dropped off, having cut through the two contiguous layers of bowel; it was immediately reapplied to the spur, and three more inches divided, and after it was applied for the third time and had dropped off it had made a total incision of nearly nine inches in length. It was not until I had used a modification of Mr. Michael Banks' method, by a T-shaped arrangement of rubber tubing, that the results were entirely satisfactory. The specimen, which I will pass around, was examined microscopically by Dr. Morris Longstreth, and pronounced to be a cylindrical epithelioma. These two opera-

tions were reported in *The Journal of the American Medical Association* for May 5, 1888.

Some months later the patient detected a large gland in the mesentery, and for its removal I opened the abdomen for the third time on June 20, 1888, by a curvilinear incision, about ten inches in length, parallel with the edges of the ribs, and running back into the loin. She recovered as perfectly and as quickly from this as she had from the previous operations, and is now, and has been ever since, in perfect health, and quite able to do a full day's work at the washtub or elsewhere.

The fæcal fistula which remains gives her but little annoyance; with the aid of a compress and cork she is able to restrain all leakage, and finds it necessary to cleanse the parts but once a day. Her bowels are open once daily by the natural outlet, and her condition is quite comfortable, so much so that she declines any plastic operation for the closure of the fistula, though I know that she is not cowardly, and always regarded an abdominal-section as a trifle.

This case is the last in which I used this method for re-establishing the fæcal circulation. Since then we have all been using bone, catgut, and rubber rings. But rings have had their day; the opening obtained by them is too small for anything but temporary use, it rapidly contracts, and the obstructive symptoms recur. In a case in which I shall have to operate in a few weeks I shall not use rings, but shall adopt the "four-inch" incision of Abbé, and I am so far from feeling certain that the four-inch incision will not contract too much that I regret I did not adopt this method at the primary enterectomy, three weeks ago, even though an anastomosis operation was afterward to be performed.

In most of our enterectomies for chronic obstruction, the patient is frightfully exhausted before we have the opportunity of operating, and the best authorities now agree that the removal of the affected intestine and the establishment of a temporary artificial anus is all that we can hope to do at the primary operation, leaving the re-establishment of the intestinal circulation to be accomplished at a second operation after the strength of the patient has been restored.

Now, if the obstruction is high up in the intestine and an artificial anus is made, it is quite questionable if, from the intestine above the artificial anus, the patient will ever absorb nourishment enough to gain the necessary strength to have the anastomosis operation performed. But if Dupuytren's or some similar clamp was used at the primary operation (its adjustment does not take thirty seconds), within a few days some of the nourishment would pass to the lower intestine, and when

the strength has been re-established the anastomosis operation could be performed, if desired. The application of the clamp does not prevent the immediate and continuous use of the artificial anus.

DISCUSSION.

Dr. William E. Ashton—One or two points have struck me in listening to this interesting report of Dr. Barton's. In the first place the disappearance of a malignant growth after an exploratory incision. Such a disappearance has been especially noted in cases of extra-peritoneal fibroids of the uterus. Operations have been performed for fibroids where the tumor has been found between the folds of the broad ligament, and sometimes after operation it has disappeared. Last November I performed a lateral anastomosis, without resection, for malignant disease of the ileum. There has been no recurrence of the disease since, and yet it was undoubtedly cancer.

Now in regard to clamps and lateral anastomosis. I believe that the enterotome has but one place in abdominal surgery, and that is where we are operating for a faecal fistula or a false anus. It seems to me no argument to say that in those cases where the opening is high up, we can do better work by a more rapid operation. If these cases can not take nourishment for eight days they must die, as rectal feeding alone will not save them. I have recently looked over the literature on this subject, and find that the majority of cases of lateral anastomosis and gastro-enterostomy died on account of late feeding. If there is great exhaustion it is better, in a high obstruction, to make an artificial anus and feed directly into the bowel than to do either a lateral anastomosis or use the clamps.

In a low operation, as in the case of Dr. Barton, I would not use clamps. This woman for five years has had an artificial anus and has been obliged to keep this opening plugged up. This is a source of great distress and inconvenience. If the patient is able to stand the shock of the resection of six inches of bowel, she is certainly able to stand the extra shock of a lateral anastomosis with rings or a large incision.

Dr. Barton—I think Dr. Ashton did not quite understand my remarks. I did not mean to say that the clamp takes the place of the rings. There is a certain class of cases who are *in extremis* when we operate, and after removal of the bowel it is as much as we can do to get them back to bed. To attempt anything further is ridiculous. We can apply the clamp, which does not interfere with the artificial anus, and within a few days the rest of the bowel is thrown into service. All authorities agree that the artificial anus should be made;

all that I claim is, that after making the artificial anus, if we put on the clamp we shall secure further bowel for the purpose of absorption. Afterward anastomosis can be made if necessary; I can not see how this interferes. You have all the bowel for nourishment that you have if you did not put on the clamp; you have the rectum for nourishment if needed, and you have the hope that in a few days still more of the bowel will be available.

The clamp does not obstruct the bowel in the slightest degree; the opening with the clamp upon it acts as an artificial anus from the moment the operation is finished, just as well as if the clamp was not there.

DOES ORGANIC DISEASE OF THE HEART PRECLUDE THE USE OF CHLOROFORM IN PARTURITION?

By T. RIDGEWAY BARKER, M. D., Demonstrator of Obstetrics in the Medico-Chirurgical College, Philadelphia; Out-door Obstetrician to the Pennsylvania Dispensary.

In entering upon the discussion of a subject of such paramount importance to mother, offspring, and obstetrician, one can not lay too much stress at the very outset upon the axiom that "A good remedy will fail of its effect if not properly administered." This fact must be kept uppermost in our mind if we would avoid fatal results, not due, however, to the employment of the agent, as some would make it appear, but to the lack of attention and care exercised in its administration. That there is a radical difference between surgical and obstetrical anæsthesia (analgesia), goes without saying. If we consider for a moment the stages of anæsthesia, which differ only in the profoundness of the impression—first, sopor; second, stupor, and, third, stertor—we can not fail to notice that in analgesia one rarely has occasion to carry the effect beyond the first degree (sopor), while in the surgical variety we are obliged to advance beyond this and keep the patient in the second stage, or that of stupor, thus markedly increasing the gravity of the prognosis.

In this connection, let us devote a moment's consideration to the progressive effect of chloroform vapor upon the nerve-centres of the cerebro-spinal system, beginning, as it does, at the inferior extremity of the cord, sacro-lumbar, and gradually extending its paralyzing influence upward until it reaches and expends its force upon the medulla oblongata. These well-established clinical observations having been verified by physiological experiment, we are justified in putting them to practical use. What other agent, may be pertinently asked, can

relieve—aye, abolish—pain so quickly and safely, yet leave reflex muscular contractility unimpaired, as chloroform? Ether and ethyl bromide have found favor with some practitioners, but neither can displace chloroform.

Fordyce Barker states in his writings: "I may say here that I have long regarded chloroform as the best and safest anæsthetic in obstetrics, and that since 1850 I have used no other."

The danger from the employment of chloroform in this department of medicine depends more upon the carelessness with which it is administered than to any toxic effect inherent in it. The four cardinal points to be borne in mind when giving this anæsthetic are: First, plenty of pure atmospheric air; second, liberation of a small amount of the vapor at a time; third, attention to the respiration, and fourth, frequent observations as to the force and frequency of the cardiac action. That the recorded cases of death have been due in a great measure to saturation of the residual air in the lungs to a fatal degree can scarcely be doubted. A few deep, forced inspiratory efforts will quickly produce such a condition. Withdrawal of the agent under these circumstances can not prevent the further entrance of the chloroform vapor into the circulation, for it already fills the air cells. Nor will attempts at artificial respiration prove effectual, since but a small quantity of the residual air can be forced out of the lungs, while that which enters fail to sufficiently dilute the vapor owing to the tardiness of diffusion.

Let us not suppose, however, that because we administer to the parturient female small amounts of the drug continuously, therefore no risk is incurred, for experiments directed to solve this important question go to prove that even small doses, when continuously inhaled, tend to produce dangerous, and at times fatal, cardiac exhaustion. Far different is the result when given intermittently, as is the unalterable rule in obstetrics. Should we seek authority for the statement that the dangers from the careful administration of chloroform in labor are too insignificant to warrant its refusal, we have only to turn to *The American System of Obstetrics* to find therein the following: "The danger when chloroform is used only to the extent of mitigating or abolishing pain in childbirth is practically *nil*." Lusk, quoting from Bert's experiments, states "that chloroform might be intermittently administered for an indefinite period with safety." These remarks do not apply to its use in the third stage of labor, for, as is well known, after delivery of the child it is likely to occasion relaxation of the uterus, thus favoring post-partum hæmorrhage.

Offering the above as a preface to my remarks on the judiciousness of employing chloroform when the parturient female suffers from organic cardiac disease, it now remains for us to consider the effect of parturition upon this enfeebled circulatory organ, thereby securing a scientific basis for our conclusions. In the first stage of labor we find the muscular contractions confined to the uterine muscular layers and directed toward overcoming the circular fibres of the cervix, while in the second, or propulsive stage, not only does the uterus exert its power to the utmost, but also the abdominal and respiratory muscles are brought into action by the will of the parturient in her efforts to expel the fœtus. The diaphragm is forced down and its movements paralyzed by the female holding her breath.

The other respiratory muscles are likewise unable to act, and hence imperfect oxidization of the blood results. As a consequence, the cardiac movements are accelerated, greater resistance is met with in the pulmonary and aortic circulations. Moreover, a tendency exists to venous congestion, as evinced by the hue of her face and swollen veins.

Owing to the excruciating pain experienced when the head passes through the cervix, the parturient is further tempted to make additional muscular efforts, which only augment the difficulties met with. Under normal conditions this strain is of such brevity that it can not be considered of any importance, but when complicated by disease of the heart it is of far greater gravity. If the condition be one of fatty degeneration, due to a previous peri- or myocarditis, resulting in faulty nutrition and enfeeblement of the heart's action, as evinced by weak impulse, venous stasis, confused and irregular sounds, anæmia alike of brain and other organs, with faintness and oppression on the slightest exertion, this interference with circulation and respiration may readily tax its powers too far, and so cause speedy death from paralysis. Here the conditions which pertain in surgical anæsthesia are absent. The indications present are to allay excessive muscular action and respiratory spasm which is threatening the over-stimulated heart.

To allow the female to continue such efforts is to permit her to commit suicide; to warn her to desist is useless when in such agony, while delay is likely to be fatal. How can we overcome this condition of nervous excitement? Can we accomplish it by the administration of chloroform? Yes; of the two evils, for we must acknowledge there is an element of risk in giving chloroform, we can only choose the lesser, and so promptly proceed by inhalation to relieve the accessory muscles of parturition of their strain. By the abolishment of

pain we lessen the work required of the laboring heart, which, instead of beating at the rate of 140 or more a minute, may diminish in frequency to ninety or one hundred.

What has been said of fatty heart is equally applicable to conditions of hypertrophy and dilatation.

The equilibrium, if disturbed, is almost certain to result disastrously. That sense of fullness in chest and oppression due to bronchial congestion, if relief is not afforded, becomes most distressing. The cyanosis from deficient aeration is greatly exaggerated, while the insufficient blood-supply to the brain causes syncope, and may be succeeded by coma if the excessive reflex disturbance be not removed. Nor are the indications for the administration of chloroform materially different in the case of females in labor with valvular disease. Whether it be mitral in the young adult or aortic in the aged primipara the cardiac strain must be relieved if we would save our patient. As is well known, all forms of valvular disease ultimately develop a condition of ischæmia on one side with high tension. While by compensation life may run on for years, yet, when the strain of parturition comes, it will soon be overthrown if precautions are not taken to prevent it.

Of what benefit will be our knowledge of the value of cardiac "physiological rest," as laid down by Fothergill, if we do not apply it under these conditions? We all appreciate the importance of securing "quietude of mind and body" when such pathological states exist. Then why not employ the quickest and safest means to obtain it by the inhalation of chloroform? If the danger is great from "active exercise—climbing mountains, running up stairs, lifting heavy bodies, and all kinds of exercise involving heart strain"—how much greater, aye, how immeasurably so must it be when the parturient female forces, with the anguish of despair, every muscle to its utmost in her desire to deliver her child. From a study of chloroform anæsthesia in obstetric practice we have seen how it should be administered and how it acts. Surely none will deny that in its employment under these circumstances we act otherwise than for the best interest and safety of our patient. That one may not be charged with being a blind adherent to theory, one has only to turn for support and justification to the teachings of the late lamented Fordyce Barker, who states: "It seems to be almost accepted as an axiom, with both the profession and public, that the inhalation of chloroform is dangerous for any woman with disease of the heart. For more than thirty years I have been convinced that this opinion is quite erroneous, and I have so taught in my lectures and in former writings."

He goes on further to say: "I have seen several cases, complicated by dangerous heart lesions, which terminated favorably, as I think, solely from the use of chloroform."

Snow, likewise, is of the opinion, "In all forms of valvular disease," he says, "chloroform, when carefully administered, causes less disturbance of the heart and circulation than does severe pain." To quote from Championniere: "If," he says, "I recognized an organic affection of the heart, without pulmonary complications, I should rather give the woman chloroform than to let her suffer." Were further proof necessary as to the propriety of employing anæsthesia, one might include among this group of clinical observers, Vergeley, who expresses himself thus: "Diseases of the heart are not contra-indication to the use of anæsthesia." Macdonald states: "In almost all cases of heart disease with labor chloroform has been given, and apparently with benefit, during delivery. If carefully administered I think it can not but be useful in all cases." Since such eminent authorities advocate its employment can we justify ourselves in refusing our patients the benefit and comfort this agent affords? What is the danger from chloroform compared to the state of exhaustion and collapse into which the parturient female will inevitably fall? If this heart is forced to the verge of paralysis from overwork and excitement, why shall we not use the means at our command to lessen that strain? Let us have a reason for that faith that is in us, and not hesitate to employ extreme measures to overcome extreme dangers.

Chloroform by inhalation can and will, if properly administered, save the lives of parturient females, suffering from organic disease, when death seems imminent from over-stimulation of its ganglia through reflex nervous action. Organic heart disease, then, does not preclude the use of chloroform in labor, but rather is a condition calling for its careful administration.

THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION

Will hold its eighteenth annual session at Cincinnati, Wednesday, Thursday and Friday, October 12, 13 and 14, 1892. An excellent programme, containing the best names in the valley and covering the entire field of medicine, will be presented. An address on Surgery will be delivered by Dr. Hunter McGuire, of Richmond, Va., president of the American Medical Association. An address on Medicine will be made by Dr. Hobart Amory Hare, professor of Therapeutics and Clinical Medicine, Jefferson Medical College, Philadelphia.

The social as well as the scientific part of the meeting will be of the highest order.

The Mississippi Valley Medical Association possesses one great advantage over similar bodies, in that its organic law is such that nothing can be discussed during the session save and except science. All ethical matters are referred, together with all extraordinary business, to appropriate committees. Their decisions are final and are accepted without discussion. The constitution and by-laws are comprehensive and at the same time simple. Precious time is not allowed the demagogue or the medical legislator. The officers of the Pan-American Medical Congress will hold a conference at the same time and place.

CHARLES A. L. REED, M. D., *Cincinnati, President.*

E. S. MCKEE, M. D., *Cincinnati, Secretary.*

CHARTER OF INCORPORATION OF THE MEDICAL AND SURGICAL SOCIETY OF MISSISSIPPI.

J. H. Lucas, G. S. Huger, P. J. McCormick, W. H. Lipscomb, Henry Christmas, Sam. Walker, J. W. Saunders, J. B. Gresham, Edwin Wright, B. A. Vaughan, G. S. Roubush, J. C. Hall, A. G. McLaurin, Lea Williamson, Wirt Johnston, Geo. W. Purnell, G. E. Kelsey, M. J. Alexander, E. M. Grant, T. B. Ford, G. A. Teunisson, C. H. Bates, W. S. Green, J. M. Taylor, F. D. Smythe, John Wright, H. H. Hughes, J. M. Green, Chas. D. Mitchell, B. F. Ward, S. D. Robbins, B. F. Kittrell, Chas. S. Priestly, W. F. Hyer, F. L. Fulgham, J. W. Bennett, Geo. K. Harrington, T. A. Catchings, R. S. Tombs, Alex Fairley, B. M. Bishop, C. R. Henderson, P. Fairley, I. P. Partin, J. L. Rosborough, C. A. Rice, A. B. Pitts, M. J. Thompson, A. H. Bays, H. A. Minor and D. T. Price, together with any others whom they may associate with them, and their successors, are hereby created and constituted a body corporate. The name of said corporation shall be "The Medical and Surgical Society of Mississippi," by which name it may sue and be sued and plead and be impleaded. The object and purposes of said corporation are: The advancement of the science of medicine in all its departments, the discussion of medical subjects, the improvement of the medical profession, and the cultivation of social and friendly feeling among its members. The corporation shall have succession for a period of fifty years from the date of its charter, and shall have power to purchase, acquire and hold real and personal property, and to sell or transmit the same for the sole use and

benefit of said medical and surgical society. Said society shall have power to adopt a constitution, rules and by-laws not in conflict with the constitution and laws of this State and of the United States, prescribe the qualifications of its members and the duties of its officers and agents; to adopt a code of ethics and to prescribe and enforce penalties for the violation of the same by its members, not to be greater than expulsion from the society.

It may adopt a seal and exercise any or all the rights and privileges prescribed and granted by Chapter 26 of the "Annotated Code of 1892." The officers of said society shall be a president, a secretary, one or more vice presidents, and as many other subordinate officers as may be deemed necessary under the constitution and by-laws to further the interest and conduct the affairs of the society. The incorporators, or a majority of them, may meet at the most convenient time and place within this State, after the approval of this charter by the governor, and organize by the election of officers and the adoption of a constitution and by-laws.

Applied for and published this 28th day of May, 1892.

From the above charter we judge that the organization of a new medical association in this State is inevitable.

If the existing condition is such that demands this action, then by all means let it be taken. The objects of all medical associations and societies should be strictly scientific. If the Mississippi State Medical Association is derelict in this respect, then let it be chastised, if a new organization can be called a chastisement of the old. If its members have sought to use it for selfish ends, then let them be rebuked. If a number of scientific gentlemen think they can better promote the science of medicine in another organization, then it is not only their privilege, but clearly and unmistakably their duty, to organize. No one can possibly regret more than we that such a condition of affairs should exist in our State as to call for this new organization. With such men at its helm as mentioned in its charter, published above, it will succeed, and will be an able body of scientific men. Mississippi has a great deal of unutilized material, and this association may be able to develop it to a greater degree than the Mississippi State Medical Association, thus accomplishing much good in the State. We do hope that the most perfect harmony will prevail between the two associations, for otherwise the influence of the medical profession in the State will be greatly impaired.—*Mississippi Medical Monthly*.

Selected Article.

[From *Bacteriological World and Modern Medicine.*]

STUDY OF THE GERMS OF MALARIA.

By PROF. B. DANILEWSKY, Charkoff, Russia.

In *Annales De L'Institut Pasteur*, p. 758, a long article appears by Prof. Danilewsky giving the details of experiments and observations on malaria, a comparative study of the parasite in birds and human beings. The article relates chiefly to numerous investigations carried on with birds, but greatly elucidates the question of malaria in man. At the outset the professor insists on the discovery that birds suffer like man, not only from chronic malaria, but also from an acute affection resembling intermittent fever in man. From his observation he is of the opinion that the hematozoa connected with malaria in man and birds are, to say the least, closely connected by their resemblance, if not identical. As in man, this investigator has observed that malarial microbiosis of the blood in birds may become very severe and cause death. The destruction of red blood corpuscles occurs as in man. This phenomena causes very great anæmia, loss of appetite, exhaustion, and death. He also observes the temporary disappearance of the hematozoa, and their reappearance after a time in greater quantities than before, and this, too, after the birds had been kept in a laboratory.

These cases show an analogy to those which occur in human beings suffering from malaria, apparently cured, but succumbing to a relapse away from infectious grounds or malarial districts, without having been again exposed to influences where the germs existed. These are cases which do not respond to treatment by quinine. This might be explained by the fact that at that time the germs are not amœboid, but in the crescent form of Laveran, and it has been demonstrated that quinine acts only on amœboid forms. The author insists that the ordinary hematozoa in the blood of birds is not simply a sign of symbiosis, but truly of a chronic infection. Besides



this, he states that the birds are subject also to an acute form of the disease. In birds apparently in good health, in which the blood contains hematozoa, the red blood corpuscles are suddenly attacked. In the interior appear bright red spots formed by the cytozoa (pseudo-vacuoles). These bodies increase in size and become filled with granules of melanine. Their number is variable. In weak subjects there is a blood corpuscle attacked among several hundreds of normal ones. In ordinary cases, the proportion is from 1 to 20 or 50; in more serious affections, it is 1 to 5 or 8. As all microbes of animal nature, living or developing themselves in the interior of cells, are usually called cytozoa, cyto-parasites, or cyto-microbes, the author proposes to give to the malaria plasmodium in man the name of *cytamœba* instead of the ordinary term of *hœmamœba*; but as in the bird the same parasite is not mobile, and is not, therefore, *amœboid*, he proposes to change the word to *cytosporon malariae*.

It will be seen, then, that the acute and chronic forms of malaria in birds and man are attributed, by this author, to two different parasites, at least so far as their appearance is concerned; the first having the *amœboid* form of movement, and the second the crescent form, being non-mobile (the parasite of Laveran).

The shape of these organisms, however, seems to vary greatly, according to observation, in the same individual. Sometimes the development appears in the form of a spore, and again in the form of a rose or a marguerite. At other times there are large or small spherical bodies, and again, various other forms (as may be seen in the accompanying plate). Observations tend to prove that the chronic form in birds pertains to the period of life of the *cytosporon*, and in man to the *cytamœba*, and the chronic form corresponds to the existence of the crescent of Laveran. The author establishes the fact that the chief seat of the action of the parasite is not the blood, but begins in the generating organs of the blood, the spleen and bone marrow. This is true in warm-blooded animals and cold-blooded animals, for investigation has also been made in frogs.

The facts related tend to prove that in both birds and

man malaria exists in three forms: First, acute affection, with rise of temperature and symptoms of serious disease. The microbiosis of the blood is due, in this form, to the presence of *cytosporozoa* in birds, and to *cytamæba* in man (malarial typhus of man).

Second, chronic infection, without manifest fever: microbiosis by an attack of the red blood corpuscles, by the *polimitus* and the *Laverania* in both birds and man.

Third, mixed infection: characterized by the simultaneous appearance of *amæboid* forms of acute cases and the *polimitus* of chronic cases, both occurring in birds and man.

The following is a table of explanation of the figures appearing in the plate. It will be seen by those who have observed the parasite of malaria in man that those of birds, frogs and lizards, are closely related, if not identical.

EXPLANATION OF THE PLATE.

Parasites of Birds.—Figs. 1, 2, 3, 4.—The smallest cytozoa in the shape of pseudo-vacuoles; Figs. 2, 3 correspond to the intensive infection.

Fig. 5.—Change of the form of the cytozoa *a* under the influence of heat of 39 deg., 40 deg. centigrade, during 12 to 15 minutes.

Fig. 6.—The cytosporozoa in acute malarial infection from 1 to 2 days after the attack of the corpuscles.

Fig. 7.—The same one day later; the marguerite form is more marked.

Fig. 8.—Profile view.

Figs. 9, 10, 11.—Advance sporulation of the cytosporozoa; the hæmoglobin has been chased away by a weak acid.

Figs. 12, 13, 14, 15.—Diverse forms of cytosporozoa in sporulation with parts of blood corpuscle (18, 20); Fig. 18 presents the other clear form of the marguerite.

Fig. 21.—The blood corpuscles entirely filled by the spores of the cytosporozoa.

Fig. 22.—Field of ripe spores of the cytosporozoa in blood plasma.

Figs. 23, 24, 25, 26.—Mixed infection of the corpuscles by the cytosporozoa and microbe in chronic infection.

Fig. 27.—The cytosporozoa in sporulation and in fan shape (see Fig. 47).

Figs. 28, 29, 30.—The cytozoa of the chronic infection of the nucleus visible in the living (the hematozoa of cold-blooded animals).

Fig. 31.—The macrophage from the liver of a blue jay.

Fig. 32.—Spherical cytozoa of chronic infection (*Laverania*?). Little bodies provided apparently with double contours.

Figs. 33, 34.—Corpuscles transformed in cytocytses filled with bright fusiform bodies (spores?); in Fig. 34, outside of these bodies are some smaller, very motile.

Fig. 35.—The cytocytses of the blood in the case preceding, but without being filled with liquid, and with very fine curved bodies, resembling those of chronic infection.

Fig. 36.—The rose-shaped body of a scraped kidney.

Figs. 37, 38, 39.—Psorospermose of the red corpuscles (?) opaque granulous spheres (cytocytses) of the kidney and of the bone marrow.

Fig. 40.—More advanced stage, in the form of a raspberry; beginning of segmentation.

Fig. 41.—The ulterior differentiation of germs in the form of crescent.

Fig. 42.—The cytocytses filled with germs entirely developed.

Fig. 43.—The cyst is broken and allows the exit of motile germs.

Fig. 44.—Young *Laverania* (hemogregarines) of the spleen.

Fig. 45.—*Laverania* formed under the observer's eyes at the expense of spherical hematozoa.

Hemoparasites of the Frog.—Fig. 46—Twin hemogregarina developed at the expense of pseudo-vacuoles.

Fig. 47.—Intracellular sporulation of an "amœboid" cytozoa in the form of "fan" or "rose."

Fig. 48.—The cyst with germs in the form of crescent taken from a kidney.

Fig. 49.—Free motile hemogregarina in the blood.

Parasites of Lizards.—Fig. 50.—The cytocytses of the blood with germs of the hemogregarina; analogous cyst may be found in the kidney and spleen.

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AUGUSTUS McSHANE, M. D.

COLLABORATORS:

DR. F. W. PARHAM.

DR. H. W. BLANC.

DR. A. W. De ROALDES.

DR. R. MATAS.

DR. JOHN DELL'ORTO.

Editorial Articles.

THE DEFEAT OF THE MEDICAL PRACTICE BILL.

In 1890, the physicians of Louisiana presented, through what was held by many as a representative body, a bill to the State Legislature to regulate the practice of medicine in this State. We all remember the vicissitudes and sad fate of that unfortunate bill. It was framed amid unfortunate circumstances. The disastrous floods of that year prevented the meeting of the State Medical Society; and, as it was necessary to present a bill to the Legislature, the president of the society, Dr. C. D. Owens, consulted with various members, and the result was a committee which thought itself vested with power to act. It was the manifest desire of the State society to have a bill regulating medical practice passed; but the society could not, during that year, give its sanction as an entire body to the bill proposed because the annual meeting was not held.

The time set for our meeting was but a few days before the opening of the biennial session of the Legislature; there was no time to lose, and prompt action had to be taken, and the president showed his appreciation of the situation and his

ability to meet it by moving as he did. The powers vested in the president of a society are defined in the constitution of the body. In our own case we do not think that President Owens, acting upon the advice of men deeply interested in the welfare of the society, overstepped the limits of authority or common sense by appointing, in default of a meeting of the society, a committee to frame a bill that would be just to all parties concerned, and would voice the already well known sentiment of the State society. The text of that bill was published in the *JOURNAL* two years ago and many copies were distributed throughout the State. It was duly presented in the Legislature, and seemed to be on the point of being made a law, when several influences combined to defeat it. These influences were: the opposition of our homœopathic friends, dissensions in our own ranks, and the crowding-out pressure exerted by the Louisiana Lottery bill upon everything else.

It is impossible now to estimate accurately the force of this last factor. It was a struggle for life on the part of a corporation worth millions of dollars, and the agitation and delays incident to the lobbying of the lottery bill caused more than one worthy measure to be crowded to the wall.

In regard to internal dissensions, we need only allude to the disapproval of certain features by the Shreveport Medical Society, and the unfortunate attitude of one of the most prominent members of the State society, whose too strict adherence to parliamentary forms bore fruit in much recrimination and lasting bitterness.

The remaining factor is the one that has not been given due weight. The homœopaths in our midst are too strong to be ignored. The knights of the sugary pellet are well organized; indeed, we of the regular school might learn a lesson from them; and when, in 1890, they moved on our bill, they had no little share in its defeat.

Profiting by sad experience, the State society drew up another bill, from which it was supposed that all objectionable features had been eliminated. The draft of the new bill was offered to the society at its meeting, last April. It was amended by the society, and, in its amended form, adopted as the expression of the views of the society. This bill was presented

to the Legislature, and it was very promptly rejected. On motion, it was recommitted, and it was killed with a celerity that was startling even if it was not gratifying.

For two long and weary years we will have to wait before we will be able to make another attempt to remove from Louisiana the reproach of being the dumping-ground for the medical refuse of all the other States of the Union. Louisiana will, for two years at least, remain the paradise, the refuge, for quacks and incapables from all the corners of the country.

The bill died—or, to speak more corretly, it was killed. Who killed it? and whose fault was it that it was killed? There were no internal dissensions (if we except a mild protest from the Attakapas Medical Society); there was no room for stickling for strict parliamentary procedure; and the midwives, being unaffected by the bill, said nothing. Could it be that our lawmakers are blind to the advantages of such a bill, or indifferent to the interests of the people? We do not think that they are blind or indifferent. They are men of some sense, and feel their responsibility. They will pass any measure under the sun which its promoters show them to be to the interest of the people; and no reasonable bill will be defeated unless a plausible opposition is brought forward. This last, we think, is what killed our little bill; and the opposition came from our dear homœopathic friends.

It is easy to sit down and philosophize over a defeat; but the sensible, practical man of every day life cares little for philosophizing, and impatiently wants to know why we (or somebody) did not speak in time to do some good and save the society from the ignominy of a second defeat. We would respectfully submit that the committee was credibly, though unofficially, informed, about a year ago, and again, since that time, that the homœopaths wanted certain features to be introduced into the bill, without which they would oppose it to the fullest extent of their power. Some slight changes were made, we believe, but not radical enough to please our friends, the enemy. The result is an epitaph on our bill.

If we are ever to have an entering wedge we must know the attitude and strength of a weak and despised David, who knows how to use the stone of opposition successfully on his

big opponent, Goliath. The only practical way of doing this that suggests itself at the present moment is to open official correspondence with the officials of the hostile camp, and obtain a written promise to unite with us in endeavoring to have passed a bill that will redound to the benefit of all concerned. This would give us a definite working basis, and save us from the disastrous effects of the miscalculations of a committee.

THE LOUISIANA QUARANTINE.

On June 11, 1892, the State Board of Health, accompanied by a large number of guests, made a biennial inspection of the quarantine service on the lower Mississippi. Among the guests were representative men from every line of business, prominent public officials, physicians, and representatives of the press. As was to have been expected, the visitors found everything in perfect working order. It is not necessary to describe in detail the various features of what has become widely known as the "Holt System of Maritime Sanitation." The system is now virtually what it was when Drs. Holt and Aby laid it down; it has since been continued, and improvements in certain details added as experience suggested.

It is gratifying to know that the Holt system has been approved and admired wherever the need of maritime sanitation was felt. The Pennsylvania State Board of Health, in an annual report, gives it unqualified endorsement; and in far off Spain the *Gaceta Medica Catalana*, of Barcelona, has recently published a lengthy translation of a description of the Holt system, by Dr. S. R. Olliphant, the present president of the Board of Health, published originally in THE NEW ORLEANS MEDICAL AND SURGICAL JOURNAL. There is no longer any necessity for educating the American medical world as to the advantages of our system of quarantine and maritime sanitation. The Board of Health wisely had large numbers of illustrated pamphlets sent to all parts of the civilized world where maritime sanitation would be likely to be a matter of practical importance, and due credit was given to the originator of the system, Dr.

Jos. Holt. In this connection we would call attention to a recent event at the quarantine station, the details of which are given in our "State News."

THE ANNUAL OF THE UNIVERSAL MEDICAL SCIENCES.

The publishers of the *Annual of the Universal Medical Sciences* have just sent out the issue of 1892.

The *Annual* is a work to which every country contributes its share, and yet we feel a pardonable bit of national pride knowing that it is an American undertaking. The present issue completes its fifth year. The issue of 1892, consisting of five volumes, like its predecessors, is the fruit of the same colossal amount of work as the previous issues required; indeed, a few new departments have been introduced, and all the changes and improvements have been adopted that experience showed to be required.

The intense activity displayed in all departments of human learning makes it impossible for a physician to keep in touch with even the various branches of his own profession. The literature of the medical sciences is great and always growing. The increase in population and in the complexity of modern civilization develops new conditions and new difficulties. New diseases and new phases of old diseases call for a constantly receptive condition of the medical mind, without which personal improvement is impossible. When a man is cut off from communication with many of his fellows, he inevitably develops a narrowness and a provincialism, which form an effectual barrier against progress; he becomes a fossil. The *Annual* and similar works bring within the reach of every physician the best thoughts of the progressive men of the medical profession, and thus place him in close contact and sympathy with his brethren.

Many gems of thought scattered throughout the vast mass of periodical medical literature would be buried forever and lost to the world were it not for the comprehensive, all-embracing annual summaries. These annuals preserve what is

worth preserving; and what is not found in them forms an inappreciable part of the year's contribution to science. In this connection, it is worth noting the singular fatuity of two American publishing houses, which decline to furnish their periodical to the *Annual*; it does not seem, however, that the usefulness of the *Annual* is very seriously crippled by this conduct of the firms that should, from patriotic motives, contribute to the prosperity of the *Annual*.

We notice with great pleasure that our colleague, Dr. R. Matas, furnishes his usual valuable contribution on oral surgery. The issue of 1892 is, if anything, better than its predecessors, and it gives us pleasure to welcome the latest and best edition of a work that is composed of material that will remain a permanent factor in medical progress.

THE "BACTERIOLOGICAL WORLD AND MODERN MEDICINE."

Through the courtesy of Drs. Paul Paquin and J. H. Kellogg, of Battle Creek, Mich., we are enabled to present to our readers excellent drawings of the micro-organisms of malaria.

Malaria is a subject that possesses a peculiar interest for the people of the Southwest, and we do not doubt that our practitioners are ever ready to receive any news that might throw light on any phase of this protean affection.

The plate and accompanying article are reproduced from the *Bacteriological World and Modern Medicine*, April, 1892. The *Bacteriological World* was founded by Dr. Paul Paquin, in Columbia, Mo., during his connection with the Missouri University. His removal to Battle Creek caused the journal to change its location, and it was enlarged and the title changed to its present one. Under the able editorship of Drs. Paquin and Kellogg it has thriven as a worthy journal deserves.

Bacteriology is the newest of the medical sciences, and yet it has become an indispensable factor in medical life. It is impossible to conceive of a modern physician keeping abreast of the times without knowing what revelations

bacteriology is making. A journal of bacteriology should be on every physician's reading table, since he is thus enabled to supplement his customary literature that is devoted chiefly to clinical medicines. *The Bacteriological World and Modern Medicine* is the only journal in North America that makes bacteriology its chief feature. Among our most welcome exchanges is one that comes from Germany, the *Centralblatt für Bakteriologie und Parasitenkunde*. This excellent publication, however, is not available to the majority of American physicians on account of the language. It is pleasant, therefore, to know that in our own country we have within easy reach a journal that places its readers *au courant* with modern medicine.

We note with pleasure that a circular announcing the meeting of the First Mexican Medical Congress has been issued by a committee constituted by the most distinguished physicians of Mexico. The congress is to meet in the city of Mexico on the 6th, 7th, 9th and 10th of December, 1892. There are fourteen sections, and there will be general and special sessions. Dr. Carmona y Valle, is president; Dr. Rafael Lanista, first vice president; Dr. Eduardo Liceaga, second vice president; Dr. Orvañanos, treasurer, and Dr. Luis E. Ruiz, general secretary. This is a move in the right direction, which will doubtless meet with a hearty response from our Mexican confrères. We extend to the coming congress our hearty sympathies, and best wishes for a brilliant meeting.

State News and Medical Items.

CHARITY HOSPITAL.

The board of administrators of the Charity Hospital met on June 6, 1892, with Colonel W. G. Vincent in the chair, and Messrs. Keller, Sentell, Hubert, Seeman, McManus and Secretary Edwin Marks present at the roll call.

The minutes of the previous meeting were read and approved, as were also those of a special meeting in the interim, at which time Colonel W. G. Vincent was elected vice president temporarily, to fill the place of Dr. C. J. Bickham, resigned.

At that meeting an application of the New Orleans Polyclinic was presented to be admitted to the hospital with the same privileges as the students of Tulane University. On resolution the application was rejected, and the action of the board at a meeting in 1886, admitting the Polyclinic students, was sustained. A committee of three was appointed to proceed to Baton Rouge and oppose the petition of the Polyclinic now before the legislature. As the action was not official at that special meeting, it was unanimously resolved to make it so by approval of the minutes.

The regular business having been opened, the treasurer's report was read, as follows:

Receipts—

From ordinary sources.....	\$2,382 50
Cash balance May 1, 1892.....	48,039 97
Total.....	<u>\$50,422 47</u>

Disbursements—

Ordinary expenses.....	<u>\$8,167 14</u>
Balance on hand May 31, 1892.....	\$42,255 33

House Surgeon Miles, in making his monthly report, said that the past month had been a very healthy one, as shown by the small attendance at the hospital. He suggested that as the Edison Electrical Illuminating Company was furnishing all electrical currents to the institution free of charge, some official acknowledgment should be made.

As to the insulation of the electrical fixtures, Dr. Miles said that all precautions had been taken to prevent danger of accident or fire from short circuits or lightning strokes.

Dr. DeGrange, of the outdoor clinic, having made application for one week's leave of absence, Dr. Miles had granted it and appointed another physician to fill the vacancy for the time.

The report in detail of the different departments of the hospital is as follows: number of patients remaining in hospital May 1, 667; number of patients admitted, 499; males, 365; females, 134; number of patients discharged, 460; number died, 95; number of patients remaining in hospital June 1, 611.

In the outdoor clinic the first monthly report of the lately opened department showed: Number of consultations, 4677; men and boys, 2507; women and children, 2178; average daily attendance, 628.

The report of the clerk of the hospital was as follows: Amount received from pay patients, \$378; amount returned to same, \$43; from gate fees, \$333.70; burial certificates, \$13.50; legal certificates, \$2; amount on hand, \$684.20.

The ambulance report showed: Surgical calls, 50; medical calls, 10; wounds dressed, 25; conveyed home, 1; died, 5; false calls, 6; refused, 4; not needed, 9; transferred, 6; total calls, 116. Average time of trips, 33¼ minutes. Three pay calls netted \$30.

In the pathological department 24 autopsies were held and 118 specimens examined.

On motion of Mr. J. H. Keller a vote of thanks was tendered to the Edison Electrical Illuminating Company in conformity with the suggestion of Dr. Miles.

The secretary reported that the taxes on the Lake Providence property had been paid for 1890, and that hereafter no taxes were due, as the property had passed into the possession of the hospital.

The matter of the New Orleans Polyclinic was then brought up and the following answer to the invitation of the board to the officers of that institution to be present was read:

NEW ORLEANS, June 6, 1892.

Col. W. G. Vincent, President Board of Administrators Charity Hospital: DEAR SIR—In reply to your courteous invitation to be present, through our representative, at the meeting of your board this evening, to discuss the bill which we have now before the General Assembly, permit us to call your attention to the following facts:

Before decisive action in this affair we, recalling the suggestion urged upon us by your honorable body two years ago, appointed a committee to arrange an understanding with the medical faculty of Tulane University. This we happily accomplished. Our committee then waited upon you and informed you of our intentions. A reasonable time having elapsed, we proceeded with a bill, which, while we knew it would call forth no opposition from the Tulane faculty, we believed, as it granted the right sought under the regulation by the board, would meet with no opposition from that source.

A telegram to Baton Rouge from a committee of the board announcing the opposition to the bill, followed and confirmed by the resolutions published on Friday, proved therefore an unexpected disappointment.

Under these circumstances the Board's judgment in the case having been passed and pronounced before we were summoned to appear and plead our cause, permit us to say that we fail to see what good can now be accomplished by you now granting us a hearing, or by us availing ourselves of the privilege extended.

Assuring you that these unfortunate events, and no desire to antagonize your honorable Board, compel us to decline further discussion of the matter, we remain, dear sir, yours most respectfully, on behalf of the New Orleans Polyclinic,

J. H. BEMISS, M. D., *President.*

AUGUSTUS McSHANE, M. D., *Secretary.*

The communication being received, Col. W. G. Vincent read the following reply, which was approved by the board:

To the New Orleans Polyclinic: GENTLEMEN—The board of administration of the Charity Hospital, recognizing the great advantages offered by the New Orleans Polyclinic, desire to extend prompt and courteous response to your request to appear before them and receive such explanation and information as they have deemed fitting in reference to the bill which you have presented to the General Assembly, in which you ask for "unrestricted statutory rights," of "full access to the Charity Hospital at all times."

It is proper to state that the administration of this hospital is opposed now, as they have always been in the past, to any legislation which gives "unrestricted rights" within this institution, for many reasons, principal of which is that it grants a dual or triple supreme authority within its walls, all exercising rights under statutory enactment, and which is prejudicial to the good order and discipline of the hospital.

The board of administrators, however, appreciates very fully the necessity of the use to the New Orleans Polyclinic of the extensive material and advantages of this hospital, where from 900 to 1000 poor sick are daily treated, and they will continue to extend to you in the future, as they have been doing in the past, the amplest facilities for the use and service of this institution as is deemed compatible with the care and protection of the unfortunate sick who have been confided to our charge.

I desire to call attention, as an evidence of the wishes and views of the board on the subject, that a formal resolution was passed some two years ago, specially granting the use of the hospital to the New Orleans Polyclinic, and which we are gratified to know has been accepted and availed of.

Respectfully, W. G. VINCENT, *Vice President,*
For the Board of Administrators of the Charity Hospital.

The reading of the reply of Colonel Vincent ended the business of the meeting, which then adjourned.

MARITIME SANITATION—HONOR TO WHOM HONOR IS DUE.

There has recently been a newspaper controversy which has a special interest for medical men. The importance of the question, as a matter of local medical history, is great enough to justify the reproduction of the following documents, which are self-explanatory:

[EDITORIAL FROM TIMES-DEMOCRAT, JUNE, 17, 1892.]

The Holt System of Maritime Sanitation.

There is a bit of unwritten history connected with the recent quarantine inspection tour of the Board of Health and invited guests to which *The Times-Democrat* refrained from calling public attention until the facts, as they were reported, had been carefully investigated and been found to be correct. It is but right that the community should be made aware of the bit of history referred to.

We may first call to mind the four years of service of the Board of Health under the guidance of Dr. Joseph Holt, of which there is a vivid remembrance not only in Louisiana, but throughout the entire country. That period of service, as everybody knows, has become famous in the annals of sanitary science and commercial history. It is an era of triumph in the struggle of science against imported pestilence.

Near the close of that eventful period of service, which was one of unrelenting labor and anxiety for those engaged in it, Dr. Holt, after working out to its smallest detail and thoroughly establishing the system of maritime sanitation under which we have ever since enjoyed, and are now enjoying, a pleasurable sense of security against foreign pestilence, found his health so seriously threatened as to necessitate a complete withdrawal from his field of work and a temporary removal to a fresh environment. The earnest appeal made by the people of New Orleans to retain Dr. Holt's invaluable services, and, when that was out of the question, the heartfelt, kindly wishes with which he was sped forth on his departure by a grateful community, are in the recollection of every one and will not soon be forgotten.

Remembered, also, is the excitement of public interest as to the question of Dr. Holt's successor. The public mind was not a little stirred as to the selection of a person fit to assume and to wear, for the community's safety, the mantle which

the retiring sanitarian had dropped. And even in this choice of his successor, it was Dr. Holt himself who came to the people's reassurance. He placed his hand on Dr. C. P. Wilkinson as his friend and successor; and on the strength of Dr. Holt's recommendation, more than anything else, Dr. Wilkinson, amid the hopes and fears of the entire people of the Mississippi Valley, was promoted to the onerous post of President of the Louisiana State Board of Health. The people owed their immunity and their sense of security from alien pestilence to Dr. Holt; to Dr. Holt, President Wilkinson owed his elevation to the headship of the board.

The system of maritime sanitation which Dr. Holt conceived, elaborated and established at the quarantine station, on the Mississippi river, is practically the same to-day as it was the day he stepped down from the presidency of the Board of Health. A few improvements in matters of unessential detail have been introduced into its working here and there, where actual experience showed that there was room for improvement, but it is only in unessential details, whose technicality forbids our dwelling upon them here, that any change has been made. The system, in its warp and its woof, in its fabric and its texture, stands precisely where it stood when it had the finishing touch put upon it by its author's hand.

This system, to which humanity owes so much, to which the material interests and the health and the happiness of New Orleans, and of the whole Mississippi Valley, are under everlasting obligations, is known from the one end of this western hemisphere to the other, and cordially recognized, as the "Holt system." It has been adopted at all seaports of the American continent which have Southern traffic connections, from the harbors on the Gulf and Charleston, S. C., to the St. Lawrence and Quebec, and from San Francisco to the Willamette. There is not a board of health in a maritime district of the United States which has not sent to examine the working of this our quarantine system, and there is not a board of health which, after close and scientific examination, has not adopted it, either in its totality or in all its essential and distinctive features.

And these various boards of health have, without exception, candidly acknowledged the source of their indebtedness. They have made their reports ring with the name and fame of the illustrious author of the system to which, in common with ourselves, they are under the heaviest obligations. It is, with each and every one of them, "the Holt System of Maritime Sanitation," and it is pronounced by more than one of them after experiment to be "an ideal quarantine." We have at

our elbows, as we write these lines, many reports of boards of health, north, south, east and west, as well as much other documentary matter referring to this subject, and we might cite from them scores of pages in which the New Orleans system of quarantine is held up as a model, and in which Dr. Holt receives by name unstinted and grateful recognition of his work as being the true solution of the tropical-commerce difficulty. But our readers, we presume, will take these outside tributes to the efficacy of the system and to the genius and ability of its author for granted, without the citations. They are ready if called for.

Nor is it from the outside alone that the Holt system has received due and adequate recognition, in spite of the antique saying that "a prophet is not without honor save in his own country." The Holt system has had its full meed of admiration and of recognition also at home. Here, again, we might quote columns of printed matter emanating from home scientists and physicians, laudatory alike of the system and of its author. But the space at our disposal admonishes us that we can refer to only one or two of the more typical. Dr. Olliphant said last year, in a publication headed "Quarantine: " "The system of 'Maritime Sanitation,' under which name it is known all over the world, has been introduced and inaugurated in Louisiana for the first time, by one of our former presidents, Dr. Joseph Holt. To him all due honor be given! He has rendered an immense service to humanity and commerce. Holt's maritime sanitation is Louisiana's gift to sanitary science."

Nor can we forbear to quote, limited as is our space, portions of a handsome eulogy on the Holt system and on Dr. Holt by the present quarantine physician, Dr. C. P. Wilkinson. Said Dr. Wilkerson, *inter alia*, in the inaugural address which, as president of the State Board of Health, he delivered on April 27, 1888:

"If he who makes two blades of grass grow where one grew before is a public benefactor, what shall we say of men who release from the trammels of superstition, ignorance and unreasonable restraint the commerce of the world? Actuated by the single purpose of greatest good to the public, the real object of their official stations, Dr. Joseph Holt, who conceived this plan, that Board of Health which sanctioned it, and Dr. Thomas Y. Aby, the faithful officer who so intelligently carried it out, have been instrumental in preserving our commerce and preventing the appearance of yellow fever in New Orleans in the past few years, an achievement which certainly entitles them to an exalted renown.

"Such, gentlemen, is the system which protects us from the importation of pestilence from abroad, and leaves our do-

mes tic commerce unannoyed, and which has been left to our management by those who have preceded us. What will we do with a heritage so magnificent, a trust so sacred? As executive officer of this board I announce that its policy is to faithfully follow the previous administration of this system, without any change whatever."

This, it will be observed, is recognition of a warm and unequivocal character.

So far, what is here set down is written history; it is chronicled in printed reports all over the United States, and is laid up in the memories of a grateful people. We now come to the "bit of unwritten history" to which we referred earlier, and which, incredible as it may appear, proves there is at this late date a disposition if not to rob Dr. Holt of the laurels he has gained, at least to dim the lustre of them that they shall not be recognized as his.

When Dr. Austin was appointed quarantine physician four years ago, with a very pretty and deserved compliment to the Holt system which he was going to operate, he caused to be erected over the front of the disinfection building a large and handsome sign bearing the legend, "The Holt System of Maritime Sanitation." The whole maritime shipping of this port expressed its pleasure of the graceful recognition. A week or two ago Dr. Austin, as everybody knows, was replaced as quarantine physician by Dr. C. P. Wilkinson—the same Dr. Wilkinson from whose inaugural address of 1888 we have quoted the eulogy on Dr. Holt and his system. Dr. Wilkinson, upon taking charge, immediately ordered the sign to be hauled down and put in the furnace. And the order, of course, was obeyed. He then had all evidence of its former site obliterated by repainting the front, the building itself having been painted only a short time before.

Such is the little bit of hitherto unwritten history. How far do readers of the *Times-Democrat* think that Dr. C. P. Wilkinson's action in the matter consists with the spirit of his quoted eulogy on Dr. Holt's system? And how far do they think that it comports with the obligations under which we all, with hearty admission, lie to Dr. Holt for the benefits arising to health, wealth and happiness from that system?

Our feelings concerning this transaction are of a kind more robust than elegant, perhaps; however, we merely state the case; public opinion will furnish the criticism.

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The following communication appeared in *The New Delta*, the *Times-Democrat* having refused to print it on account of its "unparliamentary language:"

JUNE 21, 1892.

Editor Times-Democrat, New Orleans: SIR—Only this morning have I succeeded in obtaining a *Times-Democrat* of the 17th inst., the issue containing a vicious attack upon me. I at once reply and demand space in your journal for the publication of my answer. I am at present in ignorance of the motive which has actuated you in this matter; no loyalty to a worthy friend can prompt an honorable man to unwarranted disparagement of another, nor can the needs of upright journalism require the immolation of a victim for another's glory.

There is no lie so villainous as the half told truth. You and the malicious instigator of your vile attack have together concocted a slander upon me, woven from a tissue of half told truths, disreputable alike to young and to old. You say, "To Dr. Holt President Wilkinson owed his elevation to the headship of the board." That statement is the half told truth. It is true that Dr. Holt was my warm supporter, and for that I owe to him much; nevertheless all the old members, Shakespeare, Barr, Kohn, Kells, Von Gohren, had been my associates on the board for more than a year and a half. Of the new members Dr. Watkins had been chief sanitary inspector of the board during and before my membership.

Dare you say under such circumstances these gentlemen would have given me a unanimous election on the *ipse dixit* of any man?

You say "the present system is to-day, with a few unessential particulars, the same as when its author (Dr. Holt) left it." That statement is another half told truth. That portion of Dr. Holt's system, known as the heating chamber, is now entirely different from what it was when he left it. The engravings of each are on file, and your paper has been furnished a copy of each. The cost of Dr. Holt's heating chambers was about \$1200; the cost of those at present in use was over \$10,000. What an enormous sum of money to expend for "a few unessential particulars!"

You say your "bit of unwritten history, etc.," proves there is at this late date a disposition to rob Dr. Holt of his laurels. Your reference to me in that connection is a whole untruth. If you will refer to the report of the Board of Health for 1889, written after the completion and installation of the present service, you will find on page 53 over my signature: "This combination of methods, resulting in a system of maritime sanitation superior to any the world had ever seen, was the creation of Joseph Holt, M. D., president of the Board of Health from 1884 to 1888." Since that time nothing has occurred to cause me to change that opinion.

You say, "Dr. Austin caused to be erected a large and

handsome sign bearing the legend: 'The Holt System of Maritime Sanitation.'"

That statement is a half told truth, and a very small half at that. The manufacturers of the heating chambers requested permission of me, as president of the Board of Health, to put their sign on their work done at the station. I, thinking that this meant lettering on some part of the casting or a neat plate, usual for foundry work, readily gave my assent, with this condition attached: "Provided you put in addition to and over the firm name, 'The Holt System.'" Will you have the justice to decide rightly whether to Dr. Austin or to me belongs the credit of the "very pretty and deserved compliment to Dr. Holt?" The manufacturers sent their sign down, and on my next visit to the station I saw stretching across the front of the largest building on the place, the disinfecting shed, a huge black-lettered board sign bearing this legend: "The Holt System, manufactured by H. Dudley Coleman & Co," and this sign, without one word of maritime sanitation, exciting the ridicule rather than the plaudits of the maritime interests, remained in position from May, 1889 to April, 1892. I early suggested to Dr. Austin to remove this disfiguring advertisement and was heatedly denied, to be clandestinely charged by him because of my perfectly proper suggestion with enmity toward Dr. Holt, and an endeavor to "rob him of his laurels, at least to dim the lustre of them that they shall not be recognized as his." In April, 1892, it was suggested to Dr. Austin that the name of the manufacturer be effaced and maritime sanitation take its place, which change was immediately effected.

Some days after I had taken charge, I ordered this and other signs on the station removed, because they were unsightly; and I am sure no reputable man in the country will accuse me of being actuated by any other motive. To remove all doubts on the subject I will state, that should the editor of the *Times Democrat* think it necessary to uphold Dr. Holt's renown by the erection of a sign, and will send this station one suitable, I will take great pleasure in placing the same in a suitable position as soon as received. I do not think any painted sign can add to the esteem in which Dr. Holt is held, nor can the tearing down of a multitude of signs detract one iota from his fame.

Trusting that the maliciousness of your informant is clearly apparent to you, and your maliciousness is clearly apparent to the public, I am, very respectfully,

C. P. WILKINSON, M. D., *Resident Physician.*

RESOLUTION OF THE BOARD OF HEALTH, JUNE 23, 1892.

The Board of Health met at 8:15 o'clock June 23, 1892, Dr. Olliphant presiding and Drs. Kells and Formento and Messrs. King, Dunbar and Odenheimer present.

Dr. Kells, under the head of new business, offered a resolution to the effect that as a sign bearing the inscription of "The Holt System of Maritime Sanitation," at the quarantine station, on the Mississippi river, had been taken down by the quarantine officer without the consent of the board, that the same be restored, or a new one put up resembling in style and lettering the one taken down.

The motion was seconded by Mr. Dunbar, and the matter was discussed at length.

The following resolution was then offered and adopted:

"*Resolved*, That this board cause to be erected, in a prominent place at the quarantine station, on the Mississippi river, a sign bearing the following inscription: 'The Holt System of Maritime Sanitation.'"

The meeting then adjourned.

Dr. V. M. Bass has located at Craig, Yazoo county, Miss.

Dr. H. Hayward, of New Orleans La., is at Robinson's Springs, Miss.

Dr. Henry B. Hartman, of New Orleans, died June 12, 1892, at West Melville, La., aged 58 years.

Dr. Felix Formento has returned from Lansing, Michigan, where he attended the annual convention of the State Boards of Health as a delegate from this State.

Miss Clara Perkins and Dr. W. D. Roussel, of Patterson, were united in marriage on June 15. Dr. Roussel is a prominent young physician and the bride a charming and accomplished lady.

Dr. McCormick, of Ruston, has charge of the mineral springs at the summer normal school at that place. The doctor has been appointed to this position to study the medical qualities of the water.

James H. Randolph, Tallahassee, Fla., for fifty-six years a practising physician, died May 23, 1892, aged 83 years. He was a native of Virginia, a son of Easton Randolph, United States Marshal of the Territory of Florida. Deceased was superintendent of the insane asylum for a term of years.

MORTUARY REPORT OF NEW ORLEANS.

FOR MAY, 1892.

CAUSE.	White.....	Colored...	Male.....	Female...	Adults....	Children..	Total
Fever, Yellow							
“ Malarial (unclassified)....	3	5	6	2	5	3	8
“ Intermittent	1			1		1	1
“ Remittent	3	3	1	5	1	5	6
“ Congestive.....	5		2	3	2	3	5
“ Typho	3	1	2	2	1	3	4
“ Typhoid or Enteric.....		2		2	1	1	2
“ Puerperal	1			1	1		1
Influenza.....							
Scarlatina							
Measles							
Diphtheria	5	2	4	3		7	7
Whooping Cough	1		1			1	1
Meningitis	4	4	3	5	2	6	8
Pneumonia.....	13	17	17	13	16	14	30
Bronchitis	9	11	7	13	4	16	20
Consumption	36	41	38	39	66	11	77
Cancer	9	3	1	11	12		12
Congestion of Brain.....	11	1	7	5	4	8	12
Bright's Disease (Nephritis)	12	10	8	14	21	1	22
Diarrhœa (Enteritis)	49	21	37	33	25	45	70
Cholera Infantum	54	11	40	25		65	65
Dysentery.....	8	4	7	5	11	1	12
Debility, General	3	5	3	5	8		8
“ Senile	15	15	13	17	30		30
“ Infantile	8	9	10	7		17	17
All other causes	183	111	166	128	178	116	294
TOTAL	436	276	373	339	388	324	712

Still-born Children—White, 23; colored, 23; total, 46.

Population of City—White, 184,500; colored, 69,500; total, 254,000.

Death Rate per 1000 per annum for month—White, 28.35; colored, 47.65; total, 33.63.

F. W. PARIHAM, M. D.,

Chief Sanitary Inspector.

METEOROLOGICAL SUMMARY—MAY.

STATION—NEW ORLEANS.

Date.....	TEMPERATURE.			Precipn. in inches and hundredths..	SUMMARY.
	Mean	Max.	Min.		
1	74	80	67	.02	Mean barometer, 30.04.
2	73	80	66	.18	Highest barometer, 30.21, 1st.
3	76	83	68	0	Lowest barometer, 29.85, 20th.
4	74	82	66	T	Mean temperature, 74.
5	76	83	68	0	Highest temp., 88, 30th; lowest, 55, 22d.
6	75	83	67	.05	Greatest daily range of temperature, 20, 18th.
7	76	83	68	T	Least daily range of temperature, 11, 10th.
8	74	82	67	.14	MEAN TEMPERATURE FOR THIS MONTH IN—
9	76	84	67	1.30	1871.....73.0 | 1877.....72.0 | 1883.....74.0 | 1889.....74.0
10	72	77	66	.05	1872.....76.0 | 1878.....70.0 | 1884.....76.0 | 1890.....74.0
11	72	79	65	0	1873.....74.0 | 1879.....76.0 | 1885.....74.0 | 1891.....74.0
12	74	81	68	.04	1874.....75.0 | 1880.....76.0 | 1886.....73.0 | 1892.....74.0
13	76	83	69	0	1875.....76.0 | 1881.....77.0 | 1887.....75.0
14	77	84	70	0	1876.....75.0 | 1882.....74.0 | 1888.....73.0
15	78	86	70	0	Total deficiency in temp'ture during month, 35.
16	76	84	69	0	Total deficiency in temp'ture since Jan. 1, 266.
17	76	83	70	.01	Prevailing direction of wind, S. E.
18	73	83	63	.83	Total movement of wind, 7206 miles.
19	74	80	68	0	*Maximum velocity of wind, direction and date,
20	73	82	64	0	45 miles, from N., 9th
21	66	74	59	T	Total precipitation, 2.62 inches.
22	61	67	55	0	Number of days on which .01 inch or more of
23	64	73	56	0	precipitation fell, 9.
24	67	75	59	0	TOTAL PRECIPITATION (IN INCHES AND HUNDREDTHS)
25	71	80	62	0	FOR THIS MONTH IN—
26	74	82	66	0	1871.....5.08 | 1877.....1.48 | 1883.....5.41 | 1889.....11.17
27	78	86	69	0	1872.....3.14 | 1878.....8.11 | 1884.....4.33 | 1890.....5.32
28	77	85	69	0	1873.....18.68 | 1879.....4.63 | 1885.....5.77 | 1891.....0.76
29	80	86	74	0	1874.....0.22 | 1880.....6.55 | 1886.....3.07 | 1892.....2.62
30	81	88	74	T	1875.....2.53 | 1881.....3.20 | 1887.....3.99
31	80	86	74	0	1876.....7.10 | 1882.....6.83 | 1888.....9.75
					Total excess in precip'n during month, 2.70.
					Total deficiency in precip'n since Jan. 1, 4.45.
					Number of cloudless days, 6; partly cloudy
					days, 25; cloudy days, 0.
					Dates of frost, —.
					Mean maximum temperature, 81.
					Mean minimum temperature, 66.

NOTE.—Barometer reduced to sea level. The T indicates trace of precipitation.

* To be taken from any five-minute record.

G. E. HUNT, *Local Forecast Official.*

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[No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the first day of the month preceeding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a written order for the same accompany the paper.]

ADENOID GROWTHS OF THE NASO-PHARYNX, AND THEIR TREATMENT.

By DR. A. W. DE ROALDES,

SURGEON EYE, EAR, NOSE AND THROAT HOSPITAL, NEW ORLEANS, LA.

Mr. President and Members of the Louisiana State Medical Society: In selecting the theme of "Adenoid Growths of the Naso-Pharynx" as the subject of this paper, my object is to call your attention to a pathological condition which, whilst well known to the specialist, is, unfortunately, too seldom recognized by the general practitioner. This affection is so common among the young, and its immediate and remote consequences are so baneful, that the physician who, in our day, fails either through carelessness or through ignorance to diagnose it, incurs great responsibility.

When I will pass to you these photographs representing types of patients affected with adenoid vegetations, most of you will, I am sure, at once remember having frequently met with these facial characteristics among the children of your clientele.

History.—As to the history of this affection it may be well to state here what is generally unknown, that more than 100 years ago William Hunter made some admirable preparations, both

normal and pathological, of this organ, which can be seen in the Hunterian Museum of Glasgow.

The pathological importance of this tissue, subsequently described by Green,* Lacauchie,† Robin,‡ Kælliker,§ and best by Luschka,|| was not, however, recognized until the rhinoscope became an instrument of diagnosis, when Czermach,¶ Voltolini,** DeTrœlsch†† and Læwenberg‡‡ began to mention it on the living.

Anatomy—Normal and Pathological.—Now, gentlemen, without entering into the details of the normal and pathological anatomy of the naso-pharynx. I will simply recall the fact that there exists normally, more or less disseminated throughout the mucous membrane of that region, a lymphoid tissue, which is structurally analogous to the faucial tonsils and to the lymphatic ganglia. This tissue predominates in the roof and posterior wall of the “cavum pharyngis,” where it has been designated by Luschka under the name of “Pharyngeal Tonsil,” or again “Third Tonsil.”

It is the true hypertrophy of that normal tissue, with its bearings on neighboring and distant organs, which I will now proceed to study.

In 1868, Wilhelm Meyer,§§ of Copenhagen, was the first to publish an elaborate study on the subject, his classical paper being even to-day a most instructive one.

Among the more recent observers we must specially mention Læwenberg,||| Guye, Michel,¶¶ Lange,*** Capart,††† Woakes,‡‡‡ Moure,§§§ Bosworth,|||| Fränkel,¶¶¶ Chatel-

*Green.

†Lacauchie, *Traite d'Hydrotomie*, 1853. “The glands of the pharynx, says the author, form in the upper part of that organ a sort of secreting sponge.”

‡Robin, *Dictionnaire de Medecine de Nysten*, 1855.

§Kælliker, *Gewebelehre*, 1859.

||Luschka, *Der Schlundkopf des Menschen*, Tübingen, 1868.

¶Czermach, *Du Laryngoscope etc.*, Edition Francaise, Paris, 1860.

**Voltolini, *Allgem. Wien Med. Zeitung*, No. 33, 1865.

††DeTrœlsch, *Maladies des Oreilles*, 1863.

‡‡Læwenberg, *Archiv für Ohrenheilkunde*, 1865.

§§Wilhelm Meyer, *Hospitals Tidende*, Nov. 4 to 11, 1868; also *Trans. Med. Chir. Soc.*, London, 1870.

|||Læwenberg, *Des tumeurs adenoides du pharynx nasal*, *Gazette des Hopitaux*, 1878.

¶¶Michel, *Krankheiten der Nasenhöhle, or Maladies der fosses nasales*, tran. francaise de Capart, Bruxelles, 1879.

***Lange, *Annales des maladies de l'oreille et du larynx*, tome V, 1879. Communication au Congrès d'Amsterdam.

†††Capart.

‡‡Woakes, *Post nasal catarrh*, Philadelphia, 1884.

§§§Moure, *Manuel pratique des fosses nasales*.

||||Bosworth, *Adenoma of the naso-pharynx*, *Journal of Otology*, Jan., 1882, and growths in the nasal passages, *Med. Record*, Jan. 13, 1883.

¶¶¶Fränkel, *Ueber adenoid vegetationen*, *Deutsche Med. Woch.*, 1884.

lier,* Roe,† Hooper,‡ Gouguenheim,§ who, with many others, have furnished very important papers on that subject.

Medical Geography.--Some observers, like Meyer, Læwenberg, Massei|| and Watson,¶ have advanced the theory that this disease was more frequent in cold climates. This opinion must be abandoned. Dampness seems to be a more important factor. A personal experience of several years teaches me that in our southern latitude and damp gulf climate adenoid vegetations are very common. My hospital reports** will show that among 4911 cases admitted during 1890 and 1891 in the Ear, Nose and Throat department, 963 were affected with more or less marked hypertrophy of the pharyngeal tonsil, which involved 425 operations. The diagnosis may, it is true, be influenced according to the view held as to the exact limit when a normal pharyngeal tonsil becomes pathologically affected by hypertrophy.

Influence of Sex.—If sex seems to be unconnected with the development of these growths, nothing is better demonstrated than the influence of age.

Influence of Age.—While some authors incline to the belief that in some cases they may be congenital, it is admitted that very young children may become liable to this disease. In fact two of my most obstinate cases of chronic suppuration of the middle ear were in children aged respectively six and nine months. Still, children between five and fifteen years seem to be more predisposed. This is certainly the period of life which corresponds to the highest activity in the lymphatic structures, when a tendency to hypertrophy in that system is generally developed.

The hyperplasia of Luschka's gland may follow inflammatory changes of the naso-pharyngeal mucous membrane, under the stimulus of repeated colds, or again be the sequel of attacks of eruptive fevers or of whooping cough. As the child reaches the age of puberty the liability to hypertrophy

*Chatellier, Des tumeurs adénoides, etc., Paris, 1886.

†Roe, Adenoid Growths in the Vault of the Pharynx, Med. Record, Sept., 1879.

‡Hooper, Boston Med. and Surgical Journal, March 15, 1888.

§Gouguenheim, Des végétations adénoides, Gazette des Hôpitaux, 26 Janvier 1892.

||Massei, Patologia e terapia della faringe, delle fosse nasali e della laringe, Vol. 1.

¶Watson, Diseases of the Nose and its Accessory Cavity, London, 1890.

**De Roaldes, First and Second Annual Report of the Eye, Ear, Nose and Throat Hospital, New Orleans, 1890-91.

of the pharyngeal tonsil diminishes, manifestly, or in fact, if developed during infancy, the growths, at puberty, have generally a tendency to atrophy to a certain extent, or more properly to undergo a fibroid retrocessive process.

Influence of Cleft of Palate.—Some observers, like Meyer, Oakley Coles,* Morell Mackenzie† and Boucheron,‡ have mentioned the frequency of adenoid growths in children affected with congenital cleft of the hard and soft palate. J. Solis Cohen,§ after giving a very good description of such a case, remarks that “retrocession of this structure to its normal dimensions, after closure of the cleft in the palate, as had been to some extent anticipated had not taken place some two years after the operation.” My attention being drawn to that subject, I have made a very close examination of all such cases that have come lately under my observation, and I must say that in all, five in number, I have found a very considerable development of the pharyngeal tonsil, which is probably due, as Meyer suggests, to the irritation of the mucous membrane by food, cold air and dust. I am, therefore, rather inclined to consider the presence of adenoid growths as a rule in cases of cleft palate, and not, as Moure and many others believe, as a mere coincidence. That being the case, I would strongly recommend the propriety of first clearing the naso-pharyngeal cavity of all the growths, and of thus obtaining a clean, solid wall, before any attempt is made to remedy the deformity. This procedure would, in my opinion, greatly help the speech of these patients after the closure of the cleft, and certainly wonderfully facilitate the task of the teachers of elocution, to whom the education of these children must always be confided.

Influence of Race.—As to the question of race, without having as yet sifted my clinical statistics in regard to that particular point, I think I can safely state that in my experience colored children are less frequently affected with adenoids than white ones; this I would attribute to the roomier naso-pharyngeal cavity in the negro race.

* Oakley Coles, Proceedings of the Royal Med. Chir. Society of London, November 23, 1869; also, Deformities of the Mouth, London, 1881, page 51.

† Morell Mackenzie, *Maladies du Nez*, Edit. Française, Paris, 1887, page 268.

‡ Boucheron, *Coexistence de la Fente Palatine avec les Tumeurs Adenoides*, Revue de Laryngologie, d'Etologie et de Rhinologie, page 328, Vol. X, 1890.

§ J. Solis Cohen, *Diseases of the Throat and Nasal Passages*, page 255; New York, 2d Ed., 1880.



Fig. 1.

EYE, EAR, NOSE AND THROAT HOSPITAL
CASE NO. 11,078.
BEFORE OPERATION.



Fig. 2.

SAME AFTER OPERATION.



Fig. 3.

REPRODUCED FROM HOOPER.



Fig. 4.

REPRODUCED FROM CHATELLIER.

Predisposition.—It has been held by Læwenberg and many others that adenoid vegetations are mostly met with in children of scrofulous constitution. Whilst I can not deny that among a thousand and more cases which have come under my observation, many were scrofulous and anæmic, still the number of well-nourished and otherwise healthy patients was such that I must agree with those observers who look upon adenoid growths as an expression of that general tendency to the involvement of the lymphatic organs in morbid processes, so characteristic of child life.

Heredity.—On the other hand, heredity is acknowledged, by most observers, as having an undoubted influence on the production of the disease. In this connection I can recall the history of a family in which I operated, two years ago, on four children for adenoid growths; the mother was quite deaf, and suffered from a post-nasal catarrh, which, by posterior rhinoscopy, was found to be due to the presence of a broad and thick adenoid cushion*. Similar examples are frequently met with. This fact explains, according to Chatellier, the heredity, in some families, of certain facial deformities, and even of certain forms of deafness.

General Character.—The general characteristics of adenoid vegetations are as follows: When examined with the mirror they present the appearance of light pink masses in the shape of cones, leaves, crests, berries, or stalactites, more or less covered by a thick, tough, greenish-yellow or bloody secretion, here and there forming scabs. On removing these, the individual growths are seen to be separated from one another by deep—generally longitudinal—furrows. According to the severity of the case the choanæ, septum and eustachian tubes are more or less covered over by these tumors. To the finger they give, in children, a sensation of “soft masses like a bunch of worms,” movable to a greater or less degree. In adults the surface is generally equally soft, but the base is hard, and when undergoing the process of atrophy it becomes smoother, more like a firm cushion.

Symptomatology.—The symptoms of adenoid vegetations will of course vary according to the amount of hypertrophy

* Since writing this paper I had occasion to operate on triplets of seven years of age, who all three were affected with adenoid growths.

and the size of the naso-pharynx. The integrity of the cavity or channel is essential to the functions of respiration, of phonation and of audition, and any obstruction, even partial, must tend to their impairment.

Respiratory Disturbances.—As a matter of fact adenoid children are all more or less subject to nasal stenosis, whether it be due directly to the partial occlusion of the choanæ by the growths themselves, or to the hypersecretion of a thick and viscid mucus, which finding its way anteriorly accumulates in the cavities of the nose, or even escapes through the nostrils.

Mothers will often call your attention to the fact that the child has catarrh, a constant cold in the head, or that it does not know how to, or cannot, blow its nose. The mucus not only comes from the masses in the naso-pharynx, but it is also secreted by the mucous membrane of the nose itself, which is in a state of passive congestion from venous stasis.

As a result nasal respiration is seriously impeded or else completely obstructed. The child is henceforth a *mouth breather*, with all its baneful effects. Nurslings are compelled to release the nipple every few seconds, since the suction pump action of the tongue and buccal cavity can not work unless the upper air way be free. The infant's struggle for its nourishment in some cases is sufficient to throw it in a violent perspiration every time it is placed at the breast or given the bottle, and it is often completely exhausted by its efforts. When asleep the mouth breathing is audible and disturbed.

When the child reaches the age of four or five years, you will find that it has learned to breath through its mouth, and takes advantage of it; its mouth is, therefore, more or less constantly open during the day. The mother will tell you that at night he is nervous, that he tosses from one side of the bed to the other, that he snores or wheezes, or again that he almost suffocates; he will also at times wake up suddenly and sit up in bed, the body covered with perspiration, with vacant eyes and an anxious look, as if it had the nightmare; this excited scene ends with a few rapid and deep inspirations, and the child falls again into a quiet sleep.

Some of these children will be particularly prone to at-

tacks of laryngismus stridulus. Coupard* has found forty-five such cases in fifty-six children affected with adenoids. Two members of this society could bear me out in the statement that their patients were relieved of frequent attacks of spasms of the larynx by removing their post-nasal growths.

You will readily understand how under such circumstances general nutrition becomes affected. Most children become pale and anæmic as the disease advances, the thorax remains flat, indrawn and undeveloped, as shown in Fig. No. 10.†

Some who are predisposed to rickets or mollities ossium will present the characteristic pigeon breast so well described by Dupuytren,‡ Robert,§ Lambron|| and others, a lesion which to-day we know to be connected oftener with adenoid growths than with hypertrophy of the faucial tonsils.

The spirometric researches of Joal¶ in cases of nasal stenosis, and especially of adenoid vegetation, have sufficiently demonstrated that the cirtometric measurement of the chest and the vital capacity of the lungs have been notably increased after re-establishing nasal respiration.

The greater importance of the pharyngeal tonsil as a pathological factor over the faucial tonsils is such that, owing to certain special reasons, if I am allowed to operate on only one of these enlarged organs, I do not hesitate to remove first the pharyngeal tonsil, so convinced am I that the benefits derived thereby are greater.

Phonatory Disturbances.—The second important function of the naso-pharynx is to serve as a resonator for the sounds as emitted in the larynx by the vibrations of the vocal cords. With an obstruction in that sounding board caused by adenoids, the voice, whether during speech or during the act of singing, presents early signs of alteration. It is thick, muffled and stuffy; it has lost more or less of its timbre, it is the “dead” voice of Meyer. The articulation of certain let-

*G. Coupard—Les tumeurs adenoides du pharynx et les laryngitis striduleus.—Revue generale de clinique et de therapeutique, Paris, 1888.

†Reproduced from Hooper, “The mechanical effects of adenoid vegetation in children.” Medical and surgical reports of the City Hospital of Boston. Fourth series, Boston, 1889.

‡Dupuytren—Repertoire d'anatomie et de physiologie, 1826.

§Robert—Bulletin de Therapeutique, 1843.

||Lambron—De l'hypertrophie des amygdales de ses facheuses consequences, de ses complications et de son traitement par les Eaux de Bagners de Luchon. Bulletin de l'Academie de Medecine, 1861.

¶Joal—Reserches spirometriques dans les rhinopathies.—Revue de laryngologie, d'otologie et de rhinologie, No. 8, 1890, par le Dr. Joal (de Mont Dore).

ters, like the nasal consonants and vowels, becomes impossible or very defective; "m" becomes "b" or "p," and "n" is transformed into "d." The nasal twang is more or less abolished, the very reverse of what happens in paralysis of the soft palate, when the nasal resonance is increased and the buccal sounds become nasal.

In orators or actors the voice is not only altered in timbre, but also in intensity.

It is weak and does not *carry*, as the French say; they have to strain their organ to reach their audience. In singers the faculty of drawing out (*filer*), the sound is almost lost; they trill with difficulty and the holding of the note is fatiguing. But what is particularly noticeable is that the voice loses some of its range, especially in the higher register.

Auricular Disturbances.—Of very frequent occurrence in this disease are disturbances of hearing, from slightest deafness and very indistinct tinnitus to well marked difficulty in hearing and otitis media chronica suppurativa with perforation. How often have I heard mothers attribute this trouble of hearing to simply a want of attention. Still, in a large majority of cases, these aural complications will lead the family to consult a physician. They are so common that Meyer found them to exist 130 times in 175 cases of post-nasal growths, that is 74 per cent. of these children were hard of hearing, 30 were affected with running ears.

Woakes thinks that scarcely 5 per cent. of adenoidean children are free from ear trouble. Michel (of Cologne) found ear complications in 36 out of 92 cases of post-nasal growths; Swinburne* 27 out of 42; Blake† 83 out of 100, Bosworth‡ 28 out of 75.

Looking at this question in a different way, Chatellier states that out of 76 cases who applied at his clinic for ear trouble 18 in 48 adenoids were found (63 per cent.). Out of 179 persons affected with middle ear disease, Swinburne found 27 cases of adenoids.

These lesions of the tympanic cavity will be accompanied with noises in the ear, which are often unnoticed in children,

*Swinburne, New York Medical Record, October 6, 1883.

†Blake, Relation of adenoid growths in the naso-pharynx to the production of middle ear disease in children; Boston Medical and Surgical Journal, March 15, 1883.

‡Bosworth, A treatise on diseases of the nose and throat; Vol. 1, page 547; New York, 1889.



Fig. 5.

EYE, EAR, NOSE AND THROAT HOSPITAL.
(PERSONAL.)



Fig. 6.

REPRODUCED FROM HOOPER.



Fig. 7.

REPRODUCED FROM CHATELLIER.



Fig. 8.

REPRODUCED FROM HOOPER

ear-ache and deafness. These last two symptoms are generally intermittent and coincide with a change in the temperature or with the hygrometric condition of the atmosphere. They are due to congestive invasions of the mucous membrane of the eustachian tubes and of the middle ear. In course of time this temporary congestion becomes permanent, and is then a simple manifestation of chronic catarrhal otitis, which will itself be characterized by more or less severe exacerbations. This last named condition will at times lead to a thinning of the drum membrane and to a perforation, ending in suppuration. When the congestion is more intense, especially when the mouth of the eustachian tubes is mechanically obstructed, inflammation sets in in the mucous membrane of the tympanic cavity, muco-pus is secreted or pus is formed—the tubes being blocked, a suppurative perforation of the drum takes place. This otorrhœa will at times cease of itself; at other times it will recur and become chronic. These are the children who will be liable to mastoiditis, with all its dangerous complications of necrosis of the temporal bone, thrombosis of the lateral sinus, meningitis, abscess of the brain, etc. Without entailing such serious results this chronic otorrhœa may disorganize the middle ear, and, by leading to incurable lesions of the conducting apparatus, cause permanent deafness.

I will probably surprise you by stating that cases of acquired deaf mutism have been known in children under eight or nine years to follow this loss of hearing. Peisson* after examining one hundred cases of deaf mutes has called the attention of the profession to this most deplorable sequel.

Wroblewski† found 92 cases of post-nasal growth in a smaller or greater degree (*i. e.*, 57.5 per cent.) in 160 cases of deaf and dumb.

Apart from these disturbances of the three important functions of respiration, phonation and audition, let me call your attention to a few other morbid alterations, which, whilst not so frequent, are yet not so uncommonly found in persons and specially in children affected with adenoid growths.

* Peisson, These de Paris, 1883.

† Wroblewski, Contribution to the Question of Post-nasal Growths. Adenoid Vegetation in the Deaf and Dumb. "Przegląd Lekarski," Nos. 23 and 24, 1891

General Symptoms.—You will at times be able to notice a marked diminution or even a complete abolition of the sense of smell.

Habitual headache, epistaxis or frequent escape of blood from the naso-pharyngeal cavity into the mouth, are not unfrequent symptoms.

A lack of memory, an impossibility to concentrate attention on a given subject, with other intellectual disturbances, have been studied by Guye, of Amsterdam, in adenoidean children under the name of aprosexia. Could not this condition of intellectual dullness be, to some extent, explained in the light of recent experiments? In a communication to the International Congress of Berlin, Flatau* demonstrated the existence of a communication between the nasal lymph passages with the subarachnoid space.

Facial Characteristics.—As I have stated in the beginning, and as these photographs will plainly show, no symptom of adenoid vegetations is more striking in marked cases than the peculiar facial expression which these patients present.

It will often allow you to make a *prima facie* diagnosis. The child's mouth is open, the superior lip is very short, the nose is pinched, the alæ sunken; there is a dull look about the eyes and a listless expression of the physiognomy. David † has insisted on the deformation of the upper jaw, with its narrow nasal chambers, its high palate in the shape of a gothic arch, its V-shaped (Fig. No. 9) narrow dental arch, with irregularities of the teeth.

This last named deformity must not be mistaken with the same condition, known under the name of prognatism, which when congenital‡ is known to be associated with low mental development, or which viewed from an anthropological§ standpoint is a racial characteristic.

In adenoidean children it has been attributed by most observers to mouth breathing and to constant atmospheric pressure within the mouth. A more important factor, I think,

* Flatau—The communication of the nasal lymph passages, with the subarachnoid space *Sajous' Annual* of 1891.

† David—Congres de Rouen 1883—De l'atrésie du maxillaire superieur produite par les vegetations adenoides du pharynx.

‡ Charon, Contribution à l'étude des anomalies de la voute palatine dans leurs rapports avec la dégénérescence. Thèse, Paris, 1891.

§ A. Bordier, (Caractères anatomique du nègre).—Géographie Médicale, page 457, Paris, 1884.

with Moure, Chatellier and Talbot* is the arrest of development of the nasal fossæ and their accessory sinuses, from disease of these cavities.

Oculists long ago recognized this danger, in cases of enucleation of an eye in children, when they insist that an artificial eye should be made use of, for fear that later on, as the child grows, the orbital cavities should become asymmetrical as a result of want of development on the operated side.

In these cases of arched palate you will often find on the vault a well marked antero-posterior bony prominence; do not mistake it, as I have known it done, for a syphilitic manifestation; it is nothing but the inferior border of the vomer, which has pressed in between the horizontal plates of the palate bone, as a result of the vertical narrowing of the nares.

Diagnosis.—With such marked symptoms as facial expression, dead voice, nasal stenosis, catarrhal discharge, mouth breathing, aural troubles, etc., it will certainly be an easy matter for you to establish your diagnosis, ever remembering that these symptoms will vary in number and intensity as the growths vary in size, position or extent, and also according to age.

Inspection of the naso-pharynx and digital examination will give you additional information and leave no doubt in your minds as to the correctness of your diagnosis.

Inspection.—By anterior rhinoscopy, adenoid growths can be recognized if the turbinated bones be very little developed and cocaine be made use of; but this examination is to say the least unsatisfactory, and not to be recommended.

By posterior rhinoscopy, with the tongue depressed and the palate relaxed, you will not fail to have in the mirror a good view of these tumors with their general character, as heretofore described.

Very seldom will you be able, as in the case represented in figure No. —, to see by single inspection of the pharynx one of the growths pressed down below the level of the soft palate.

As to their size, remember that they are in reality a little larger than they appear in the mirror, as the image is seen foreshortened.

*Talbot, Mouth breathing not the cause of contracted jaws and high vault.—Proceedings of the Forty-second Annual Meeting of the American Medical Association, 1891.

Digital Examination.—In order to have a more exact idea of these growths, especially in children, you will have to resort to digital examination, a method which I strongly recommend to such of you as are not experts with the rhinoscope.

With the patient's head held firmly against your chest by your left hand, four fingers of which are placed under the inferior jaw, and the thumb pressing gently over the inferior lip inverted over the teeth (a little trick to be specially recommended to avoid the biting of your finger), you introduce the index of the right hand around the palate, and making for the septum as a landmark you first explore the choanæ, and in rapid succession the posterior extremities of the turbinated bones, the mouths of the tubes, the vault, and lastly the posterior wall of the naso-pharynx. Upon withdrawal of your finger, you generally find it tinged with blood.

Differential Diagnosis.—As to the question of differential diagnosis I deem it sufficient, after what I have said, to recall the fact that naso-pharyngeal fibrous polypi, having the same base of implantation as adenoid growths, will give rise to many similar symptoms. When the polypus has acquired a certain size, and has invaded the neighboring cavities, you will not be liable, with a little attention, to make a mistake. The difficulty will present itself if you have to diagnose such a tumor in its incipiency, when quite small. In the case of a fibrous naso-pharyngeal polypus you have to deal with a single tumor, red, smooth, very vascular and of a considerable hardness, with a marked tendency to rapid development. Remember, also, that it is met with only in male patients. A proper consideration of these differential points will guard you against serious hæmorrhage, which would follow an attempt at removal of such a tumor with the forceps, under the belief that you are dealing with a case of adenoids.

Prognosis.—As you will readily understand from the foregoing remarks, the prognosis in cases of adenoid growths must be considered as serious by reason of their many complications, especially as long as the growths are not recognized and removed. As Hooper* says, "Some of them (children), after struggling for years for air, are left with permanent structural

* Hooper, Adenoid Vegetations in Children. Medical and surgical reports of the City Hospital of the city of Boston, 1889.



Fig. 9.

REPRODUCED FROM HOOPER. CAST FROM FIG. NO. 5.

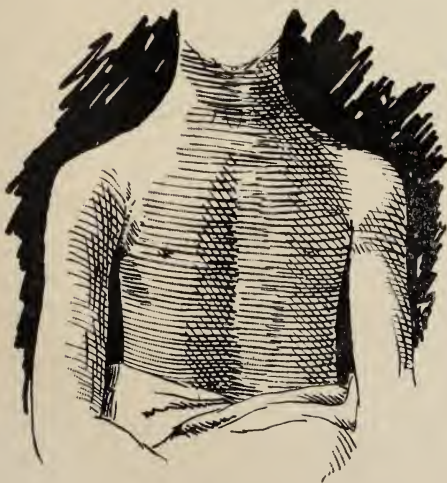


Fig. 10.

REPRODUCED FROM HOOPER.



Fig. 11.

IMPROVED GOTTSTEIN CURETTE.
LATEST MODEL (WINDLER.)

changes in the ears or in other regions of the body; others escape with good hearing, but carry through life ill-developed bones of the face, deformed upper jaws or misshapen chest walls; while still others, owing to their rugged constitution, and to the fact that the growths in some cases atrophy very early, emerge from their troubles in good condition.”

We must add that the adenoids once removed, children begin a new life and are not subject to a recurrence of these growths; such is at least the experience of most observers. As to myself, I can not but endorse this opinion. Meyer,* as well as Frankel,† mentions that when recurrence takes place, it is undoubtedly due to a lack of thoroughness in the original or subsequent operations. I must say, however, that lately Lavrand‡ (of Lille) has reported two observations of undoubted recurrences of adenoid growths, in children aged respectively six and nine years.

Dr. Delie’s§ and Dr. Cozzolino’s|| cases would tend to establish the possibility of malignant degeneration of post nasal growths.

Treatment.—Although the subject of adenoid vegetation is comparatively a recent one, still the methods of treatment instituted and the instruments invented are so numerous that their enumeration would be tedious.

Leaving aside the medical treatment, as entirely useless, the destruction of these growths by caustics such as nitrate of silver, chromic acid, etc., as slow, insufficient and unsafe in children, I will advise you to resort at once to a thorough extirpation of the offending growths.

Some specialists, like Meyer, Justi¶ and others, contented themselves at first to scrape the naso-pharynx with the nail of their forefinger hooked around the soft palate. This method may improve certain light cases, and may be resorted to for want of proper instruments. After trying it on more than one

*Meyer—Transactions of International Congress 1881, Vol. 3, page 382.

†Frankel—“Ueber Adenoide Vegetationen,” Deutsche Med. Wochenschrift No. 41, 1884.

‡Lavrand—Paper read before the French Society of Otology and Laryngology, May 2, 1892. *Revue de laryngologie, d'otologie et de rhinologie*, June, 1892, page 353.

§Dr. Delie (d'Ypres) vegetations adenoides de pharynx nasal. Recidives sarcomateuses. Mort subite. *Revue de laryngologie*, 15 Septembre, 1891.

||Prof. Vincenzo Cozzolino—Una chiara dimostrazione clinica e anatomico-patologica delta possibile degenerazione maligna, infiltrazione cancerina delle vegetazione adenoidi in un adulto sui 40 e piu anni (Il Sordomuto, Novembre-Dicembre, 1891, page 173).

¶Justi. Ueber adenoide Neubildungen. Volkmann's Sammlung, Klinische Vortraege Leipzig, 1878.

hundred cases, I have, like others, abandoned it as unsurgical and incomplete. The use of the "surgical steel nail" of Mottais even with Dolby's* and Lennox Browne's† modification is dangerous.

Meyer's ring knife has been discarded, the instrument having to be used through the nose, with the forefinger introduced in the naso-pharynx.

The galvano-cautery loop, even in the hands of an expert, will scarcely allow one to remove more than the larger vegetations.

The most commonly used instruments are post-nasal forceps, scoops or cutting curettes.

The forceps I most generally use and find most convenient is Læwenberg's forceps, modified by Hooper or by Chatellier. A Denhardt's gag is introduced by an assistant, who holds it in place whilst steadying the child's head firmly; another assistant holds the patient's hands; the operator seats himself in front of the patient, and depressing the tongue with the index finger of the left hand or with a longer depressor introduces the forceps rapidly into the post-nasal space, taking care, when he removes the growth, not to pinch the soft palate between the blades of his instrument.

With a little experience and quick movements, the forceps can be reintroduced three or four times in rapid succession before the hæmorrhage is sufficient to interfere with the further introduction of the instrument.

You will thus remove the principal masses, but experience teaches us that several sittings will be required before freeing the naso-pharynx.

A better instrument, in my opinion, than the forceps is Gottstein's cutting curette, as modified by Morris Schmidt. This instrument (Fig. 11), as you can see, is composed of a more or less perfect ring, with an inside cutting edge. The curve, defective in the older models, has been so modified as to adapt itself better to the shape of the naso-pharyngeal cavity.

The child being held in the same manner as heretofore mentioned, the curette is introduced sideways into the naso-

* Dolby, Adenoid growth of the naso-pharynx. *Lancet*, October 2, 1886.

† Lennox Browne, *Diseases of the Throat*. 1887. Page 519.

pharynx; then, straightening the instrument in the middle line, you make with it a gentle traction on the soft palate, taking care to depress the handle until it is stopped by the lower teeth; you now follow in an upward direction the posterior edge of the vomer, until the anterior branch of the curette rests firmly against the pharyngeal vault at its junction with the septum; in this position you will scoop the whole cavity from before backwards, and from above downwards. One central stroke and two lateral ones will generally suffice, or else Hartmann's lateral curette can be made use of.

For my part, for children, I very often supplement the use of Gottstein's curette by the forceps in order to smooth the cavity. In adults I prefer to make use, a few days after the operation, of the galvano-cautery, which, with the aid of cocaineization and of a White's palate retractor, allows me to destroy under the mirror any redundant tissue.

There is free hæmorrhage at first, but rarely enough to require interference. As to the question of penetration of blood into the larynx, I have found that fear more chimerical than real in operations performed without anæsthetics.

By these methods a complete cure at one sitting need not be expected. This difficulty has led some specialists to make use of an anæsthetic, more particularly in cases of children. Chloroform is generally given the preference, but as a rule its use is limited to the period of primary anæsthesia, when relaxation is obtained with a few whiffs, and the child operated in the sitting position. Whilst I have often availed myself of this procedure in private practice, without having ever seen any ill result from it, still the use of chloroform, especially when the patient has to be raised, is liable to just criticism, even during the period of primary anæsthesia. In view of past experience, no one can deny that accidents have happened during the first inhalations of chloroform.

Whilst my experience with bromide of ethyl, being limited to two operations, does not warrant any personal opinion, still I have been so favorably impressed with the results obtained that I feel justified in giving in future this anæsthetic a more general trial. Moritz Schmidt, in Germany, and Calmettes

and Lubet Barbon,* in France, have strongly endorsed this procedure, well described by Royals.† I understand this method to be now the favorite one for adenoids at the Presbyterian Eye, Ear and Throat Charity Hospital of Baltimore.‡

Besides the many advantages of bromide of ethyl over other anesthetics (for short and painful operations), so clearly pointed out by Dische,§ its use does not preclude the sitting up position, which is of great advantage in operating adenoids.

The patient is seated in the position which he is expected to occupy during the operation. The flannel of an Esmarch's chloroform mask is thoroughly saturated with the liquid and applied closely over the nose and mouth. Five or six deep inspirations are sufficient to determine the necessary narcosis, which is characterized by redness of the face, dilatation of the pupil, insensibility of the conjunctiva and slight muscular relaxation. Then is the time to operate, for, if narcosis be carried further, muscular contracture would be superinduced. Ten to twenty grammes of a pure article are generally sufficient to produce the desired effect. The operation once over, the child recovers his senses very quickly, and is able to rise and walk, without being subject to the state of torpor which follows chloroformization.

Such, gentlemen, are the history, symptomatology, and modes of treatment of these very common growths, so well known to the specialist, but so generally overlooked by the general practitioner. I can not better end this work of vulgarization than by repeating what I have already said in the beginning in Dr. Hooper's|| own words: "This operation should be carried out by all surgeons who are brought into contact with the disease. Those who have delicacy of manipulation and who have had instruction in the affections of the naso-pharyngeal cavity, and have been taught how to examine it, and so work in it, will find the operation, in the majority of instances, a difficult one. When properly done, it is not attended by any danger to the child.

* Calmettes et Lubet Barbon, *Gazette Hebdomadaire*, Aout, 1890.

† Royals, *De l'Emploi du Brome d'Éthyle Comme Anesthetique pour l'Operation des Vegetations Adenoides de Pharynx chez l'Enfant*, These de Paris, 1890.

‡ Chisolm, Fourteenth Annual Report of the Presbyterian Eye, Ear and Throat Charity Hospital, Baltimore, 1892.

§ Dische--Le bromure d'éthyle comme anesthetique--*Pittsburg Med. Review*--and comptes rendus de journal les nouveaux remèdes--1887, p. 278.

|| Hooper, loc. cit., page 70.

The growths do not recur. Perfectly innocent in themselves, by mechanically obstructing the air tract, they may lead to results which may truly be called malignant. I therefore wish especially to urge the early removal of these growths from the child, and to protect against waiting for the child 'to grow out of' the growths."

As knowledge of the diseases of the naso-pharyngeal cavity and of this affliction in particular is diffused, that misleading word "catarrh" will no longer be applied to adenoid vegetations. It should make us alive, moreover, to our responsibility, if we defer active treatment in typical cases, on the supposition that the children will "grow out of it," since by our neglect to remove the growths, there is a risk of permanent damage to important functions which may embitter the subsequent lives of these children.

Selected Article.

THE IMPROVED CESAREAN OPERATION—WHEN AND HOW TO PERFORM IT.

(Read before the Ohio State Medical Association, May 5, 1892, by GUSTAV ZINKE, M. D., CINCINNATI, O.)

[From the *Ohio Medical Journal*, July, 1892.]

In order to present this subject with consistent brevity, neither the history of the old or "classic" operation nor the evolution of the modern Cesarean section will be entered into. To Saenger, of Leipzig, and his formulations we are entirely indebted for the perfection of the modern method of performing this operation, though many points of detail in its execution have come from other distinguished operators.

The operation itself stands unchallenged; although its range of application and usefulness are still open to discussion.

It is the object of this paper to define, if possible, the sphere of its propriety, and to illustrate the operation by drawings and the aid of a manikin constructed for that purpose.

The axiom, "When there is such defective proportion between the child and maternal passage that even a mutilated fœtus can not be extracted," is tenable to a certain extent only, for the practical reasons that the mortality rate of the "improved" Cesarean section has fallen far below that of craniotomy, cephalotripsy and evisceration. Thus, the new method of performing this operation has, of necessity, and beyond the possibility of denial, assumed a much wider scope of application and utility than the "old" Cesarean section ever possessed. It must be admitted, however, that, owing to the glorious results obtained by the "Saenger method," there is (judging from recently reported cases and the adverse criticism that followed their publication) a disposition on the part of some enthusiasts to overstep the line of proper limitation of the operation, while the more timid are inclined to remain too far this side of the line of "safety," thereby exposing the mother to greater risks than the improved Cesarean section would imply.

In considering the question, when is the performance of Cesarean section justifiable, it must be remembered that the operation has ceased to be one of necessity alone. Viewed in the light of its improvement and the wonderful results obtained by it everywhere, the operation has distinctly become one of election. The days of embryotomy, upon the living fœtus, are passed; and he can hardly be regarded as doing justice to the art of obstetrics, much less to his patient, who would remain inactive by the bedside of a woman who can not deliver herself, or who would resort to repeated needless efforts at delivery by the forceps or otherwise, until the child were dead, unless he were compelled to stand idly by because of a refusal to submit to the proper procedure either by the mother, or husband, or both.

Neither the dictates of church, school or fashion should longer interpose between embryotomy and Cesarean section. Duty in this regard is very plain and can only be frustrated by the obstinacy of the mother or her friends, who, in the event

of refusal to consent to the operation, become responsible for the death of the child.

In order to arrive at a satisfactory conclusion as to *when the Cesarean section is justifiable*, we must view the operation from two points, namely: (a) *When the operation is an absolute necessity*, and (b) *When it is an operation of election*.

(a) *Cesarean section is imperatively indicated in all cases in which, by reason of disease or malformation of the pelvis, the parturient canal is obstructed to a degree that even a mutilated child can not be delivered through the same.* This condition may be brought about by *osteomalacia, rickets, tumors*, springing from the pelvic wall, from the ovaries, or from the the womb itself, as well as from *advanced carcinoma* of the cervix. All obstetric authors have attempted to fix a certain limit of contraction as caused by *mollities-ossium, rickets*, and solid *tumors* of the pelvic wall. They are variously stated, and range between two and one-half and one and one-half inches of freedom in either the conjugate or transverse diameter of the inlet. But even a degree of contraction coming within these limits has been looked upon as only a relative indication justifying the "classic" operation, which always had a fearful record of mortality; and embryotomy, by which more mothers were *then* saved, was preferred, and many times successfully performed in cases in which the conjugate diameter of the brim amounted to not more than one and one-half inches. Hence the operator had the right to choose between Cesarean section and embryotomy, and elect the latter even when the child was still living. The same rules governed the accoucheur, up to a recent date, when tumors were the obstructing element. These rules, fortunately for the present and future generations, may safely be abandoned. They belong to the past, and will never be revived so long as the present improved Cesarean section is known. Its mortality, I believe, is less than 20 per cent. of all cases reported up to this time, and less than 8 per cent. in the hands of the more experienced operators, such as Leopold, of Dresden.

Of carcinoma of the cervix, as a positive indication for the operation, not much need be said. When the

disease is once established beyond a doubt, dilatation of the os is impracticable, if not impossible; and as the mother is already doomed to die of an incurable disease, no other course should be entertained than to perform the Cesarean section. Thus, it may be approximately stated that the positive indications for the operation are:

1. When the conjugate or transverse diameter of the brim is contracted to two and one-half inches and less, and the child still living.

2. When the same diameters of the brim are contracted to less than two inches, and the child known to be at term and dead.

3. When solid tumors, which can not be removed, obstruct the pelvic canal to a degree which prevents the birth of a child, living or dead.

4. When carcinoma of the cervix involves all of the portio-vaginalis.

5. When the uterus is ruptured with or without the escape of the child into the abdominal cavity. (Gastrotomy, with stitching of the uterine wound, or possibly a complete extirpation of the uterus may here be indicated, according to the condition of the womb, the amount of pelvic contraction, and the vitality of the mother.)

(b) *When is the improved Cesarian section an operation of election?* The answer to this question is not so easy as at first it might seem, for the reason that the merits of this operation have, as yet, not been fully determined. Many of the hysterotomies performed under the modern method have been done as a dernier resort; as, for instance, after long delay and repeated futile efforts at delivery by the forceps and turning, during which the maternal soft parts have been injured, rendered septic, and the vital powers of the mother exhausted; thus producing a condition of things, the fatal effects of which are apt to be credited to the operation, and hence unjustly increase its record of mortality. Robert P. Harris, who has helped so much to bring the art of obstetrics to its present high standard of excellency in America, especially with regard to the improved Cesarean section, asks and answers the following questions:



PLATE I.

Abdomen exposed and ready for the abdominal incision.

“Shall the Cesarean section be performed when the indications for it are not absolute and positive?”

“If by foetal destruction the mother can, in all probability, be saved, is it a justifiable act to run the greater risk in order to save the child?”

“Are the wishes of the parents for a living child to be considered in deciding as to the method of delivery?”

“When a premature delivery can not save a child in a given case, and the mother has already lost one or more foetuses by craniotomy, is it proper to save the child by an operation in which one out of five or six women have died?”

His answer is: “We think it is, for the reason that such cases generally do better than the average given.” We heartily agree with him, and also with Radford,* who maintains that, “even when delivery by craniotomy is possible, it can be justified on no principle, and is only sanctioned by the dogma of the schools and by usage, and that, therefore, the Cesarean section should be performed with a view to saving the child.”

The statements just quoted would (not without good reasons) have encountered the severest criticism and most summary condemnation by every author of obstetrics had they been announced fifteen or even ten years ago. It would not be surprising were we to see a great deal of quasi influential opposition occasionally, and for some time to come, But the fact remains that the present method of performing hysterotomy, by men skilled and experienced, has produced results beyond the most sanguine expectation. The maternal mortality rate of Cesarean section has been lessened to a degree far below that of embryotomy in any of its forms, with the added importance that most of the children thus delivered have been saved.

Of course, duty demands the saving of both lives if possible. Embryotomy invariably implies the death of the child, while, by reason of the splendid success of the Cesarean section, the life of the mother is placed in greater jeopardy.

The propriety of performing Cesarean section, therefore, should be seriously considered, and regarded as justifiable un-

* Playfair (Harris).

der circumstances which, of necessity, involve the loss of the child. These conditions may be:

1. A contraction of the conjugate diameter of the brim to the extent of three inches, in which the head refuses to enter the pelvis; sufficient time having been permitted to admit of moulding of the head; the child still living; the os fully dilated, and the membranes ruptured; the contraction ring visible; the soft maternal parts becoming tender, swollen and dry; abdomen tense and sensitive to the touch; the application of the forceps not feasible, or, if so, extremely dangerous because of injury to the soft parts of the mother, and possible rupture of the uterus; craniotomy or cephalotripsy means the death of the child at once, while it does not increase the mother's chances of recovery. Add to this a history of previous delivery by craniotomy, the conclusion is evident that Cesarean section would not only ensure living birth of the child, but were the operation promptly and properly performed, it would secure the mother a better chance for recovery than would embryotomy. The same may be said of—

2. Justo-minor and certain cases of mollities-ossium; though in the latter, complete extirpation should follow, since it is maintained that removal of the uterus has a tendency to cure this malady.

3. In cases of tumors obstructing the pelvic passage to an extent that a living child can not pass, Cesarean section may, for the same reasons, be considered equally justifiable.

4. Impaction of the fœtus has often proved an unsurmountable barrier to delivery, even in otherwise perfectly developed women; therefore it is not surprising that the complication has been not an uncommon cause of death to both mother and child, and that, consequently, delivery through the abdomen has, in certain cases of this kind, been regarded as the safest expediency. These are instances in which excessive swelling of the vulva, vagina and soft parts of the pelvic cavity has occurred, and in which turning, craniotomy and evisceration are, therefore, if not impossible, at least extremely dangerous to the mother. Much might be said of this class of cases which the watchful, scientific obstetrician will, however, rarely meet with in his own practice, but

which rather occur in consultation with less experienced practitioners, or to the unskilled midwife. With the skilful use of forceps and chloroform, however, in many cases, Cesarean section may offer the patient, under the conditions just mentioned, the best opportunity to escape from imminent peril.

5. Double-headed or double-bodied monsters, as well as hydrocephalus, may give rise to difficulties which can best be overcome by hysterotomy, though in these cases the life of the child does not deserve the same consideration that it ordinarily does.

6. Total inflammatory occlusion of the cervix, as well as great rigidity of the os and bands of cicatrization of the vagina, have become candidates for Cesarean section.* Only recently Dr. Sligh, of Granite, reported an unsuccessful case of "conservative" Cesarean section for rigidity of the os, complicated by placenta previa centralis; patient in the seventh month of pregnancy. Occlusion and extreme rigidity of the os and cicatrices of the vagina must be considered, as only relative indication for the *sectio cesarea*. It is possible for an occlusion of the os to take place to an extent that the site of the cervix, or of the os, can not be detected, or that such a degree of rigidity of the os or enormous cicatricial contraction of the vagina may exist which even incisions can not relieve sufficiently to create enough room for a full grown fœtus to pass. These complications, however, are very, very rare; and when they do occur, will, in nearly all instances, yield to the proper treatment, namely, incision and gradual dilatation. Cesarean section is seldom, if ever, necessary even when the os is totally occluded.

If the site of the os is not entirely obliterated, a crucial incision of the same may be all that is required to bring about sufficient dilatation. But these cases will assume a more serious aspect if complicated by placenta previa, or puerperal convulsions, whether it be by an occluded os incised, or an os rendered rigid by disease, or by a cicatrized vagina. If the life of the mother be threatened by continuous hæmorrhage, or frequently repeated severe convulsions long in duration, recourse to hysterectomy alone can save the mother, and possibly also the child.

* Feb. No. Am. Jour. Obst., '92.

7. Incipient or doubtful carcinoma colli is another relative indication for Cesarian section. If, however, the diagnosis can be positively established, no matter to what extent the disease may have progressed, it is then beyond doubt a positive indication which not only demands this operation, but which should be followed by a total extirpation of the uterus at the same time, provided the patient's condition does not forbid a prolonged operation.

The *post mortum sectio Cesarea* is not only universally sanctioned, but should invariably be performed in all cases where pregnancy has advanced to a period of viability of the child, or when death of the mother occurs during labor. Notwithstanding that but few children, delivered post mortem, have been extracted alive, the section should be promptly performed the moment the mother expires, or as soon as possible thereafter. Out of 107 cases of post mortem Cesarean operations reported by Schwarz not one child was taken out alive, while of the forty-five cases reported by Duer forty children were extracted alive. After the death of the mother has been established no special time can be fixed as to when the operation is a hopeless or needless undertaking. Instances are quoted in text books in which the living fœtus has been extracted five, ten and even forty hours after death. These may be regarded as probable exaggerations, or, as Harris thinks, cases in which the mother was really not dead, but in a trance. For this reason he advises that the same care should be used in this as well as the ante-mortem operation; for should, during the first steps in the operation, the mother prove to be still alive, no special harm will have been done. Of the forty living fœtuses tabulated and reported by Duer, quoted by Harris, twenty-two were delivered between one and five minutes after the death of the mother; none between five and ten; thirteen between ten and fifteen; two between fifteen and twenty-three; two after one hour, and two after two hours.

PREPARATION FOR AND DESCRIPTION OF THE CESAREAN SECTION.

This includes: (a) *Preparation of patient, her bed and room in which the operation is to be performed.* (b) *What anæsthetic shall be employed?* (c) *What instruments and other*

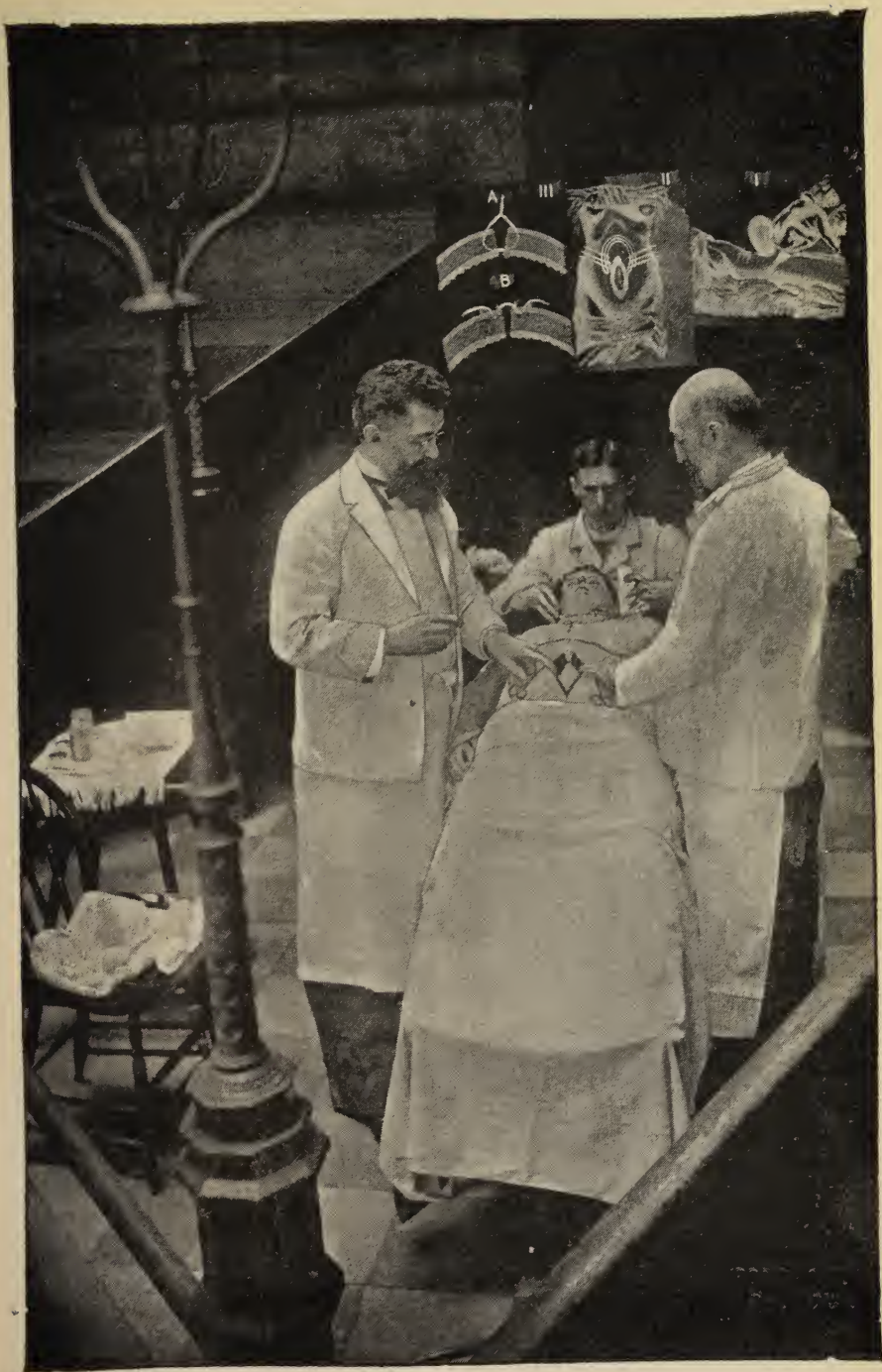


PLATE II.

Uterus exposed through the abdominal wound and ready to be incised. Three sutures have been introduced in the upper angle and the loops drawn out of the way.

articles are necessary for the operation? (d) *Best time for the operation.* (e) *The operation itself;* and (f) *The after treatment.*

(a) Much will depend upon *when, where and how* we find the patient. Whether she be in the country, town or city; whether she is already in labor, and her condition such as to demand prompt interference, with little or no time left for preparation. But it should always be remembered that an aseptic condition of the mother, as well as of the operator, his assistants and instruments, are most essential to success. Whatever little time the operator may have at his disposal should be employed in washing thoroughly, with soap and water, those parts of the mother's body which are concerned in the operation. The instruments, too, as well as the hands of the operator and his assistants, should receive thorough aseptic treatment. Antiseptics play an all-important part under such circumstances. The rest, such as cleansing the patient's body, changing her clothes on the bed, and cleaning the room, all may, in an emergency, be postponed until after the operation.

If the case comes under observation at a period of gestation which gives time for preparation—say a few days, weeks or a month or more, nothing should be left undone that may render the patient and her surroundings most favorable under the circumstances. If she can be removed to a special hospital, one devoted to abdominal surgery, it should be done. A general, especially a public, hospital should be avoided; unless it be provided with a building and an operating room appointed and set apart especially for work of this kind. There can be no doubt the chances for recovery are much better in special hospitals. The patient's home, though the humblest in the world, is preferable for the performance of the operation to a hospital filled with patients of every description and having but one operating room.

The question of *premature delivery* is hardly to be considered here, since it is self-evident that, if the patient can be safely delivered of a seven or eight months' child, this procedure should be adopted in preference to Cesarean section.

As soon as the performance of hysterotomy has been determined upon, whether in a hospital or at the home of the patient, every precaution should be used for the purpose of insuring safety. Thus, it will be well if the patient receives a daily vaginal douche ($\frac{1}{4000}$ sol. of bichloride), a warm bath and a change of underwear, for several days prior to the operation. Saline cathartics are the best for the purpose of securing free and daily evacuation. Rectal injections of tepid water will assist in relieving the bowels of their contents. On the evening before, the abdomen, mons veneris and labia should be shaved, and an abdominal binder with perineal pad, antiseptically prepared, should be applied. The bed which she is to occupy after the operation should also be absolutely clean; the bedstead taken apart and thoroughly scrubbed; the mattress and bed clothes fumigated, then well aired; sheets and pillow-slips rendered aseptic and antiseptic by boiling and subsequent dipping into a $\frac{1}{2000}$ bichloride solution before drying. If she is in her own home, the same apartment may be used for bed and operating room. This room is to be prepared as follows: If walls and ceilings are painted, they should be washed; if papered, wiped; if neither, white-washed or whitened. Windows and frames should also be washed and floor thoroughly scrubbed, and subsequently kept sprinkled with a $\frac{1}{2000}$ bichloride solution.

The temperature of the room should be kept between 60 and 65 degrees Fahrenheit for at least twenty-four hours prior to, and between 70 and 75 degrees during the operation. A temperature of between 80 and 85 degrees is preferable, for the reason that the patient maintains her own temperature better, and, consequently, the breathing continues more regular, and the heart's action is less apt to fail.

The operator, his assistants and the nurse, should be strictly aseptic. This means a bath and clean clothes in the truest sense of the word. No other patients ought to be attended by them previous to the operation. Instruments, sponges, dressings and towels must be rendered aseptic, and again sterilized before using. Operating gowns or jackets, and aprons to be worn by the operator, assistants and nurse, should also be sterilized. An ordinary kitchen

table, properly cleaned and supplied with an aseptic blanket or comfort, pillow, rubber and linen sheet, is amply sufficient for the purpose of an operating table. The patient should be dressed as "for the night," an undershirt and sleeping-gown being all she ought to wear.

On the morning of the operation no food is to be permitted, except, perhaps, a small cup of very light coffee and a small piece of toast. Some operators prohibit even this. Before or while the anæsthetic is administered, from one-eighth to one-fourth of a grain of codeia or morphine may be given subcutaneously.

Placed upon the table, her clothes are rolled up under her shoulders; the lower extremities are wrapped up in warmed, cleaned blankets, and, after the antiseptic abdominal dressing, worn by her during the previous night, has been removed, and her bladder emptied, towels wrung out in a warm bichloride solution are so placed across and along the sides of her body as to cover her clothes above, and the blankets below. The abdomen remains exposed to the operator. Enough sterilized water should be on hand for all purposes. The hands of the operator and assistants are best rendered aseptic by the method suggested by Howard Kelly.

(b) The choice of the anæsthetic is left to the operator. After ten years of experience in operative work, both as assistant and principal, I have come to the conclusion that it is very satisfactory to begin anæsthesia with the use of chloroform, and, after the patient is unconscious, to continue with the A. C. E. mixture, suggested by Reeve, of Dayton, Ohio. When this is followed by a total abstinence from food and drink during the twenty-four hours following the operation, there will be but little, often no, disturbance from vomiting.

(c) Instruments and other articles necessary for the operation may be briefly enumerated as follows: (a) An ordinary scalpel and elbow scissors for the abdominal incision. (c) A grooved director. (d) A tongue and half a dozen hemostatic forceps (less may answer the purpose). (e) Ligatures of different sizes (silver, silk, silkworm-gut or cat-gut). (f) Needle holes with sponges (antiseptic gauze or cotton may be used in place of sponges). (h) Rubber tourniquet twisted around the

uterus before it is incised (not absolutely necessary). (*i*) Abdominal irrigator (may not be needed). (*j*) Iodoform powder; iodoform or antiseptic gauze for dressing abdominal wound. (*k*) Adhesion plaster. (*l*) Abdominal bandage and perineal pad. (*m*) Hypodermic syringe and whiskey or brandy for subcutaneous injections. (*n*) Hot water bags or bottles.

(*d*) An all-important question is: *What is the most favorable time for the operation?* Without entering into a discussion of the subjects and citing the different authors and their reasons for selecting either a period immediately before, during or after dilatation of the os, I will simply state that the most favorable moment for interference is, in my judgment, when the os is sufficiently dilated to admit of a ready discharge of the lochia. If the operation is performed before this stage has been reached, the os will have to be dilated artificially. This must necessarily be deficient, to say nothing of the fact that it prolongs and complicates the operation. Still, there may be good reasons for operating earlier, as in the cases of convulsions or hæmorrhage due to placenta previa or malignant disease of the cervix; or later, as in cases where the contraction at the inlet suggests the possibility of spontaneous or forceps delivery.

The *abdominal incision* is made directly in the median line, about six inches in length, commencing immediately above the umbilicus, and continued toward the symphysis pubis. It is not absolutely necessary to make the cut directly through the linea alba. Péan and Tait prefer to penetrate the peritoneal cavity just to one or the other side of it. They claim it is difficult to bring and hold in apposition the two aponeurotic edges of the cut, and, if this fail, hernia easily results as a consequence; this can be obviated, it is said, by entering at one side of the linea-alba. This argument suggests itself as plausible. After the peritoneal cavity has been reached, the incision is best completed and elongated by the elbow-scissors.

If it is the aim to eventrate the uterus before incising it, a six-inch abdominal opening will not suffice. But eventration of the uterus, prior to delivery of the child, does not commend itself, because it necessitates a very long abdominal



PLATE III.

Shows the manner in which the delivery of the child and eventration of the uterus is effected.

incision; again, it is difficult to turn out the uterus even when the wound is eight inches in length, nor is there much to be gained by eventration of the organ at this stage of the operation. To prevent excessive hæmorrhage, a rubber tourniquet may be thrown around the uterus sufficiently low that no part of the fœtus may come within its grasp. The application of the tourniquet, however, requires the introduction of at least one hand into the peritoneal cavity. It is often difficult and frequently impossible to bring the tourniquet into position, and, after this is accomplished, its purpose may be defeated by that part of the fœtus which presents at the os, especially if the membranes have ruptured previously. For these reasons, and the loss of valuable time, the tourniquet is not often employed by experienced operators. But eventration of the uterus, as well as the application of the tourniquet, may be safely omitted during the progress of the operation. After all hæmorrhage from the abdominal wound has been arrested, and three or four sutures introduced in the upper angle of the wound, the ends of which should be fixed by forceps and the loops withdrawn from the wound and retracted upwardly, the operator is ready for

THE UTERINE INCISION.

The uterus, now exposed by the abdominal wound, is to be palpated with a view to determine whether or not the placenta is attached to the anterior uterine wall; if it is, the wall will feel thick, and the parts of the fœtus will not be so easily outlined as when the placenta is not situated in this region.

If only a section of the margin of the placenta be present, the incision should be made immediately outside of it. But when the placenta has its attachment more or less directly upon the anterior wall, the incision should be made as nearly as possible in the median line, and from above downward. If the placenta is not present, this is easily done. The womb may first be punctured with a sharp-pointed scalpel and the opening quickly enlarged with a blunt-pointed, curved bistoury. The hæmorrhage which follows, though great, is not so excessive as might be supposed; but when the placenta has been so implanted that even its margin can not be evaded, there is noth-

ing to be done but to cut through both structures and deliver as quickly as possible.

The extraction of the child is best accomplished by taking hold of one or the other extremity of the child. Some writers have tried to lay down the rule: "Always deliver the head first." Experience has shown that this is not always practicable. In a vertex presentation, the hand of the operator would have to pass down over the head to lift it out of the wound. The instant the uterus is opened and the hand introduced, it contracts, the amniotic fluid escapes and the cavity of the uterus, as well as the wound, rapidly diminish in size; so that, unless the head is promptly and easily liberated before this occurs, considerable force will be required to deliver in this manner; so much so, that there is great danger of increasing the length of the wound by rupture in a downward direction, an accident which ought to be avoided for self-evident reasons. When there is a large amount of liquor amnii in a vertex presentation, delivery of the head in advance may, perhaps, be free from difficulty; without it, or when the fluid has already drained off, and the uterus is firmly contracted around the child, no risk should be incurred or time wasted in this direction, but delivery effected by the feet. In breech-presentations, especially dorso-posterior positions, the head readily finds its way out of the wound; not so, however, when the back of the child presents anteriorly, in which case, for similar reasons, it may be better to deliver by the feet.

The only apprehension in a footling Cesarean delivery is that the uterus may contract around the neck of the child before the head can be removed, and thus the life of the child be sacrificed before it is extracted. When this danger is borne in mind, however, the uterine opening may be quickly enlarged by scissors or knife kept ready for the purpose. The same rules which guide us in the delivery of the aftercoming head, *per vias naturales*, should here be observed: the object of which is to throw the smallest diameters of the head across the passage. During delivery of the child, eventration of the uterus may be effected and the three sutures, previously introduced into the upper angle of the abdominal wound, closed by an as-



KLINE-ENG-GO.

PLATE IV.

Both child and placenta having been delivered, the sutured and contracted uterus is ready to be dropped back into the abdominal cavity.*

sistant to prevent intestinal prolapse. The child delivered, the cord is tied in the ordinary way.

The removal of the placenta may be effected by gentle traction upon the cord, or, if adherent, the fingers may be introduced into the cavity and the organ separated from its attachment. The uterine cavity is then irrigated and dusted with iodoform powder.

Proper suturing of the uterine wound is, next to strict asepsis, the most important feature of success in this operation. It consists of bringing the wound together by both deep and superficial sutures. Silk, silver-wire and cat-gut may be employed for this purpose. Cat-gut, unless absolutely aseptically and antiseptically prepared, is dangerous, for reasons evident to all experienced surgeons; silver-wire, because it can not be absorbed, may become a source of irritation and annoyance; silk is, in the opinion of most operators, the most satisfactory, because it creates no irritation and its absorption is only a question of time. The deep sutures should be passed, half an inch apart, through the peritoneal coat and the musculature only. The inner decidua surface must be avoided in every instance. The superficial sutures are passed between the deep sutures and grasp the peritoneal surface only, after the method of Lambert. The object to be attained is not only to bring the wound surfaces into close and exact apposition, but to cause its peritoneal edges to dip down into the wound, and thus secure a rapid union and prevent oozing from the uterine cavity. The uterus is now dropped back into the abdomen, which, if deemed necessary, may be irrigated with warm, boiled water. The abdominal incision is closed, and the toilet made as in an ordinary ovariectomy. As a rule, no drainage tube is needed. A hypodermic injection of the fld. ext. of ergot is then made, and the patient placed in bed.

The after-treatment is very simple: No food or drink during the first twenty-four hours. If food or stimulants are indicated, they should be administered per rectum; because,

* The three figures seen upon the blackboard in the background show respectively: Fig. 1. The simultaneous delivery of the child and eventration of the uterus, with abdominal sutures closed above the womb, to prevent prolapse of intestines. Fig. 2. The abdominal incisions with the three upper sutures introduced and drawn out of the way prior to the uterine incision. Fig. 3. Shows the manner in which the uterine sutures are introduced. A, the deep; B, the superficial.

if introduced into the stomach, vomiting will probably ensue, and this should be avoided, because of its tendency to disturb a favorable progress of the case. I know of no remedy or precaution which prevents or arrests the often very disturbing vomiting after an operation, other than total abstinence from food and drink for a reasonable time after the operation. Opiates should never be given, except for severe and continued pain. The bowels should be acted upon promptly, if they do not move spontaneously, after forty-eight hours. Saline cathartics are the best. The vagina should be antiseptically irrigated three or four times daily, during the first few days, and less often thereafter. If all "goes well," the abdominal wound need not be disturbed, nor the sutures removed, until the seventh day after the operation.

In the presence of a body of medical men, most of whom are general practitioners, it is, I trust, pardonable to have entered into every detail of the operation; and as many of the specialists and teachers in this department have never had occasion to see or perform the Cesarean section, I have taken great pains and spared no expense or time to have a manikin constructed upon which this and other operations may be satisfactorily demonstrated for the benefit of students, practitioners and incipient specialists of obstetrics and gynecology. It is the only manikin of its kind manufactured in this country, and I do not hesitate to say that it is equal to the best manikin made abroad, and in some respects even superior.

Upon it the various capital as well as minor operations may be executed in a manner approaching real life. If the presentation of this manikin will be a help to the teachers of this branch of the profession, its mission will have been fulfilled and its author amply repaid for his trouble.*

*To the firm of P. Goldsmith & Co., of Covington, Ky., who manufactured this manikin, I wish to express my sincere thanks for the time and patient effort they have so generously expended in its production. They are ready to supply any number of these manikins now, and will promptly fill all orders.

Proceedings of Societies.

THE PAN-AMERICAN MEDICAL CONGRESS.

The Committee on Permanent Organization met at St. Louis, October 14, 15 and 16, 1891, and adopted a series of general regulations for the permanent organization of the Pan-American Medical Congress, and a series of special regulations for the government of the first meeting, and recommended that the incorporators adopt both series of regulations as the organic law of the congress.

Pursuant to such regulations the following general officers were elected, viz:

WILLIAM PEPPER, M. D., LL. D., Philadelphia, Pa., President.
ABRAHAM M. OWEN, A. M., M. D., Evansville, Indiana, Treasurer.

CHARLES A. L. REED, M. D., Cincinnati, Ohio, Secretary General.

International Executive Committee:

Argentina, Dr. Pedro Lagleyze; Bolivia, Emilio de Tomassi; Brazil, Dr. Carlos Costa; British North America, Dr. James F. W. Ross; British West Indies, Dr. James A. De Wolf; Chili, Dr. Moises Amaral; Colombia, P. M. Ibaña; Costa Rica, Dr. D. Nuñez; Ecuador, Dr. Ricardo Cucalon; Guatemala, Dr. José Menteris; Haiti, Dr. D. Lamothe; Hawaii, —; Spanish Honduras, Dr. George Bernhardt; Mexico, Dr. Tomas Noriégua; Nicaragua, Dr. Juan I. Urtecho; Paraguay, —; Peru, Dr. José Cassamira Ulloa; Salvador, Dr. David J. Guzman; Santo Domingo, —; Spanish West Indies, Dr. Juan Santos Fernandez; United States, Dr. A. Vander Veer; Uruguay, Dr. Jacinto De Leon; Venezuela, Dr. Elias Roderiguez; Danish, Dutch and French West Indies, —.

The auxiliary committee nominated by the various members of the committee on permanent organization, each for his own State, and already commissioned by the chairman, was confirmed.

The election of officers of sections was begun, but time would not permit of the completion of the list, which was referred to a special committee with power to act. It has been deemed inexpedient to publish the list until it is completed, which can hardly be accomplished before the meeting of the committee on permanent organization at Detroit in June; but

the organization of particular sections will be announced through the medical press as rapidly as officers are elected by the special committee.

In accordance with the wish of the Committee on Permanent Organization, as expressed in Special Regulation No. 4, Drs. I. N. Love, A. B. Richardson, L. S. McMurtry, R. B. Hall, T. V. Fitzpatrick and Chas. A. L. Reed met in Cincinnati and signed the legal form of application for articles of incorporation of the Pan-American Medical Congress, which articles of incorporation were duly issued by the Secretary of the State of Ohio, under date of March 15, A. D. 1892.

At a meeting of the incorporators, held March 16, 1892, the following regulations, general and special, recommended by the Committee on Permanent Organization were formally adopted as the organic law of the Pan-American Medical Congress, in accordance with the Laws of Ohio, and all elections had by the Committee on Permanent Organization, in accordance with such regulations, were confirmed and made a part of the laws of the congress:

Title.

1. This organization shall be known as THE PAN-AMERICAN MEDICAL CONGRESS, and shall meet once in — years.

Membership.

2. Members of the Congress shall consist of such members of the medical profession of the Western Hemisphere, including the West Indies and Hawaii, as shall comply with the special regulations regarding registration, or who shall render service to the congress in the capacity of Foreign officers.

Officers.

3. The executive officers of the congress shall be residents of the country in which the congress shall be held, and shall consist of one president, such Vice-Presidents as may be determined by special regulations, one Treasurer, one Secretary-General, and one Presiding Officer, and necessary Secretaries for each section, all of whom shall be elected by the Committee on Organization, and there shall be such Foreign Vice-Presidents, Secretaries and Auxiliary Committees as are hereinafter designated.

The Committee on Organization.

4. The Committee on Organization shall be appointed by the representative medical association of the country in which

the congress shall meet. This committee shall select all domestic officers of the congress, and shall at its discretion confirm all nominations by members of the International Executive Committee, and in the event that any member of the International Executive Committee shall fail to nominate by the time specified by special regulation, the Committee on Organization shall elect officers for the country thus delinquent. It may appoint vice presidents and auxiliary committeemen in foreign countries independently of nominations by the members of the International Executive Committee. It shall appoint auxiliary committees, arrange for the meeting, and frame special regulations for the session of Congress for which it was appointed. It shall make a report of its transactions to the opening session of the congress.

The International Executive Committee.

5. There shall be an International Executive Committee, which shall be appointed by the first Committee on Organization, and which shall consist of one member from each constituent country. This committee shall hold permanent tenure of office, except that when a member shall fail to be present at a meeting of the congress his office shall be declared vacant, and the vacancy be filled by election held by the registered members from the country from which he was accredited. In the event of no representation whatever from the country in question, the members of the International Executive Committee present shall determine what disposition shall be made of the office.

It shall be the duty of each member of the International Executive Committee to nominate from the medical profession of his country, one vice president for the congress and one secretary for each section of the congress, and to forward the same to the chairman of the Committee on Organization; except that in any country in which the congress shall meet, it shall be the duty of the member of the International Executive Committee for that country to request his representative national medical association to appoint a Committee on Organization, which Committee on Organization shall discharge the duties designated in Regulation IV. Members of the International Executive Committee shall also nominate such auxiliary committees and shall furnish such information as the Committee on Organization may request.

6. The Committee on Organization may at its discretion cause the congress to be incorporated, which incorporation shall hold only until the final disbursement of funds for the session held in that particular country. In the event of such

incorporation such officers shall be elected and in such manner as may be required by law.

7. The following shall be considered as the constituent countries of the Pan-American Medical Congress:

Argentine Republic, Bolivia, Brazil, British North America, British West Indies (including B. Honduras), Chili, Honduras (Sp.), Mexico, Nicaragua, Paraguay, Peru, Salvador, Columbia, Costa Rica, Ecuador, Guatemala, Hayti, Hawaiian Islands, Santo Domingo, Spanish West Indies, United States, Uruguay, Venezuela, Danish, Dutch and French West Indies.

8. The sections of the congress shall be as follows:

(1) General Medicine, (2) General Surgery, (3) Military Medicine and Surgery, (4) Obstetrics, (5) Gynæcology and Abdominal Surgery, (6) Therapeutics, (7) Anatomy, (8) Physiology, (9) Diseases of Children, (10) Pathology, (11) Ophthalmology, (12) Laryngology and Rhinology, (13) Otolology, (14) Dermatology and Syphilography, (15) General Hygiene and Demography, (16) Marine Hygiene and Quarantine, (17) Orthopædics, (18) Diseases of the Mind and Nervous System, (19) Oral and Dental Surgery, (20) Medical Pedagogics, (21) Medical Jurisprudence.

Languages.

9. The languages of the congress shall be Spanish, French, Portuguese and English.

Auxiliary Committees.

10. The auxiliary committee shall consist of one member for each medical society or one for each considerable centre of population in each of the constituent countries of the congress. Nominations for the Foreign Auxiliary Committee shall be made to the chairman of the Committee of Organization by the members of the International Executive Committee, each for his own country, except that in the country in which the congress is to be held nominations shall be made by the Committee on Organization. Appointments on the auxiliary committee shall hold only for the meeting for which they were made.

Members of the auxiliary committee shall be the official representatives of the congress in their respective localities. It shall also be their duty:

(1) To transmit to the profession of their respective districts all information relative to the congress forwarded to them for that purpose by the general officers.

(2) To co-operate with the officers of sections in securing desirable contributions to the proceedings of the congress.

(3) To furnish to the general officers such information as they may request for the purpose of promoting the interests of the congress.

(4) To cause such publicity to be given to the development of the organization as will elicit the interest of the profession and secure attendance upon the meeting, and they shall discharge such other duties as will promote the welfare of the congress.

SPECIAL REGULATIONS OF THE FIRST CONGRESS.

Time and Place of Meeting.

1. The first Pan-American Medical Congress shall be held in the city of Washington, D. C., September 5, 6, 7, 8, A. D. 1893.

Registration.

2. The registration fee shall be \$10 for members residing in the United States, but no fee shall be charged to foreign members. Each registered member shall receive a card of membership and be furnished a set of the transactions.

Abstracts, Papers and Discussions.

3. Contributors are required to forward abstracts of their papers, not to exceed 600 words each, to be in the hands of the secretary general not later than the 10th of July, 1893. These abstracts shall be translated into English, French, Spanish and Portuguese, and shall be published in advance of the meeting for the convenience of the congress, and no paper shall be placed upon the programme which has not been thus presented by abstract. Papers and discussions will be printed in the language in which they may be presented. All papers read in the sections shall be surrendered to the secretaries of the sections; all addresses read in the general session shall be surrendered to the secretary general as soon as read, and all discussions shall be at once reduced to writing by the participants.

Incorporation.

4. The chairman of the Committee on Organization shall cause the congress to be incorporated under the laws of Ohio, and fifteen trustees shall be elected in accordance therewith, who by by-laws and through the Executive Committee shall supervise all receipts and disbursements by the treasurer in ac-

cordance with the laws of Ohio. The president, secretary-general, treasurer, the member of the International Executive Committee for the United States, and chairmen of sections shall be *ex-officio* members of the board of trustees.

Foreign Nominations.

5. All nominations by the International Executive Committee must be in the hands of the chairman of the Committee on Organization by June 1, 1892, and in default thereof the Committee on Organization shall elect officers for countries thus delinquent.

The Organization of Sections.

6. The officers of each section shall consist of—honorary chairmen, who shall be residents of the constituent countries of the congress; one executive chairman, who shall organize the work of the section, direct its deliberations, and deliver an inaugural address at its opening session; one English-speaking secretary and one Spanish-speaking secretary, residents of the United States, who shall co-operate with the executive chairman in conducting the correspondence of the section; and there shall be one secretary for each section, resident in each additional constituent country of the congress.

Domestic Auxiliary Committee.

7. The Auxiliary Committee for the United States shall be elected by the Committee on Organization, and shall consist of one member for each local medical society, or, in the absence of medical organization, then one in each considerable centre of population, which Auxiliary Committee shall co-operate with the Committee on Organization and with the officers in promoting the welfare of the congress. Nominations for the Auxiliary Committee shall be made by members of the Committee on Organization, each for his own State, except that, in the failure of any member to make such nomination by January 1, 1892, or in the inadequacy of the same, the chairman of the Committee on Organization shall supply the deficiency.

Executive Committee.

8. The board of trustees shall designate seven members, including the president, treasurer, secretary general, and member of the International Executive Committee for the United States, who shall comprise an executive committee which shall transact all business of the congress *ad interim* in accordance with by-laws adopted by the board of trustees.

Amendments.

9. Amendments to these regulations can be made only by the International Executive Committee on a majority vote, ten members constituting a quorum, at any meeting of the congress.

Pursuant to the laws of Ohio and the regulations adopted as above, and in accordance with nominations by the Committee on Permanent Organization, the incorporators elected fifteen trustees, as follows:

Dr. W. T. Briggs, Tenn.; Dr. Geo. F. Shrady, N. Y.; Dr. P. O. Hooper, Ark.; Dr. S. S. Adams, D. C.; Dr. H. O. Marcy, Mass.; Dr. J. F. Kennedy, Iowa; Dr. H. D. Holton, Vt.; Dr. L. S. McMurtry, Ky.; Dr. N. S. Davis, Ill.; Dr. Levi Cooper Lane, Cal.; Dr. I. N. Love, Mo.; Dr. Hunter McGuire, Va.; Dr. J. C. Culbertson, Ill.; Dr. A. Walter Suiter, N. Y.; Dr. C. H. Mastin, Ala.

Drs. L. S. McMurtry (Ky.), I. N. Love (Mo.) and W. W. Potter (N. Y.) were designated to act as members of the Executive Committee.

The organization of the congress is complete in British North America, the British West Indies, the Spanish West Indies, Guatemala, Nicaragua, United States of Colombia, Brazil, Uruguay, Venezuela and the Argentine. It is confidently expected that the nominations from the remaining countries will be in by June.

It is expected to announce the completed organization of the congress, its sections and auxiliary committees, domestic and foreign, by July 1, 1892.

On behalf of the Committee on Permanent Organization.

CHARLES A. L. REED, *Chairman*.

J. W. CARHART, *Secretary*.

CLINICAL SOCIETY OF MARYLAND.

BALTIMORE, Md., May 6, 1892.

The 266th regular meeting was called to order by the president, Robt. W. Johnson.

Dr. Geo. H. Everhart was elected to membership.

Dr. Howard A. Kelley introduced to the Society Dr. Weigert, of the Rotunda Hospital, Dublin. Dr. Weigert was invited to take part in the proceedings.

Dr. H. A. Kelley then spoke on

INJURIES TO THE VAGINAL OUTLET,

illustrating his remarks by many beautifully prepared photographs thrown upon a screen by a stereopticon. The photo-

graphs were all taken from cases under Dr. Kelley's care, both in Philadelphia and in the Johns Hopkins Hospital, Baltimore, and illustrated the operating room, normal vaginal outlets, injured outlets of different kinds and the various steps in the operation for restoration.

Dr. Kelley said, in part: Injuries to the vaginal outlet are of three sorts: First, involving the external anterior part of the *perineum*, that is the tissue from the fourchette backward toward the anus and upward toward the vagina. This is a superficial tear of no serious moment. The second form is the complete *tear*, involving the whole of the recto-vaginal septum. Here the sphincter is ruptured, and as a consequence the patient is unable to control her bowels or gases. The fact that a prolapsus is so rarely associated with this condition shows that the perineal body is not the supporting structure of the pelvic organs. The third form is the internal tear, that is where the rupture lies in the right or left side of the vagina, or both, and can only be seen on drawing apart the labia and lifting up the anterior wall with the speculum. This tear is concealed, and is rarely seen. It is, however, from its frequency and its effect the most important of all, for the result of such an injury is relaxation of the vaginal outlet.

The rupture in the sulci extends down into the tissues separating the levator ani from its rectal attachments, the muscle is therefore no longer able to hold the rectum up under the pubic arch; the anus drops backward, the vaginal walls roll out, and often without any external injury whatever or even with an external perineum larger than normal from the overstretching. Extensive eversion of the vagina with decensus of the uterus is one of the sequences of the inside tear.

The operation for such injury is resection of the relaxation. There is no advantage in an operation that does not sacrifice any of the tissues; the best treatment is to take out of the relaxation just enough tissue to bring it back again to the normal size. It is not proper to confine this resection of the vaginal outlet to the exterior alone. The injury is more on the inside, and for this reason the operation is also made to extend up the vagina by making the denudation or resection in both the sulci and across the lower anterior face of the posterior vaginal wall. Two triangular areas of denudation point up both sulci; in these the tissues on either side are loosely approximated by means of a single silk-worm-gut suture to each sulcus. This is the tension suture.

A number of catgut sutures are then able to do the work of approximation above this. (Catgut must never be used where there is much tension.) The lower part of the denuda-

tion is brought together by silk-worm-gut sutures passed in a transverse direction. An outlet thus restored appears perfectly normal or even virginal. If you were to examine such an outlet a year or two after operation, you would say that the woman had an intact perineum.

Dr. J. Edwin Michael agreed with Dr. Kelley that the essence of the whole matter is the amount of damage inflicted upon the sphincter ani muscle. Sometimes a long perineum is a better indication of internal trouble than a torn perineum. The operation referred to by Dr. Kelley, in which no tissue is lost, can hardly compare with the operation which Dr. Kelley practices; it can not take up the broken ends of the sphincter and tuck them up under the pubes, and that is what is wanted in these cases.

We are apt in these cases to do too much, and to make the vaginal outlet too narrow. The point on the labium, at which the normal cleft ceases, is comparatively easily determined, and this enables us to give the proper size to the external opening; but in our internal denudations we are inclined to do too much and produce too great narrowing.

I recently attended a patient in labor, who had previously had a tear repaired by the method which has been explained by Dr. Kelley. The new made perineum withstood the trial of a second labor, and is now about as good as before the labor occurred.

We ought to be thankful to Dr. Kelley for taking advantage of the circumstances with which he is surrounded and illustrating the subject in this vivid way.

J. H. Branham. The tear of the levator ani muscle may sometimes be extensive without any laceration of the mucous membrane; and, on the other hand, the mucous membrane may be extensively lacerated with very little laceration of the muscles. Nature, of course, attempts to repair these damages, but the general practitioner, in allowing his patient to move about and sit up too soon, thus allowing pressure from above on the torn muscle, interferes with the efforts of nature. The condition should be recognized, and the patient kept long enough in bed to permit of thorough repair.

Dr. Harry Friedenwald read a paper on

CRANIAL DEFORMITY AND OPTIC NERVE ATROPHY.

Dr. G. J. Preston thought the nerve atrophy was due to certain inflammatory conditions of the meninges and special pressure, and not due to general intracranial pressure.

The operation of linear craniectomy has not been a success thus far. The operation gives an opportunity for brain

expansion, but very little. The damage has usually been done before the operation is undertaken.

Dr. Friedenwald—In cases of tumors of the brain which are found far away from the anterior part of the brain, optic neuritis follows, and it is very hard to account for it except on the theory of increased intracranial pressure, and my suggestion was that in cases of marked cranial deformity we are probably likely to have at some period a time when the intracranial pressure reaches the same height as it would in the case of intracranial tumor.

Dr. I. E. Atkinson narrated a case of rapidly growing intra-thoracic tumor, ending in death by suffocation in six weeks after first consulting his physician. The tumor, an aneurism of the innominate artery, was exhibited by Dr. K. B. Batchelor.

W. T. WATSON, *Sec.*

1519 N. Broadway, Baltimore.

THE AMERICAN HEALTH RESORT ASSOCIATION.

This association met at the Tremont House, Chicago, June 30, and held three sessions.

There were present delegates representing Canada, Michigan, Massachusetts, Wisconsin, Florida, New Hampshire, New York, Pennsylvania, California, Illinois, Vermont, Colorado, Texas, Iowa, New Mexico and Central America.

A large correspondence was read by W. A. Chatterton, secretary, from the absent members in various parts of the country.

The president, T. C. Duncan, M. D., of Chicago, then delivered a lengthy address, in which he outlined the good work of the association, and how it was appreciated by the profession, enabling them to select climates adapted for the various cases of consumption. From reports received from the winter points, New Mexico had proven the most satisfactory. This is of interest to the profession who are trying to save some of the "hundred thousand consumptives" who die annually in this country.

Dr. J. F. Danter, of Toronto, Canada, read a paper on the "Climates and Resorts of British America."

A report on the climate of Manitoba was read, from Dr. Clark, of Winnipeg.

The climate of New Brunswick was presented by Dr. J. Z. Currie.

From these reports it seems that there are a large number of consumptives in Canada, especially in the eastern provinces.

Dr. Adam Miller read a paper on sun spots and magnetic influence in disease.

The climate of Nebraska was presented by Dr. Brown.

The climate of California and its resorts was presented in papers by Drs. J. D. Hartley and S. W. Andrews, of Chicago.

Dr. W. P. Roberts, of Boston, read a report on the climate of New England, in which he reported that 15,000 die annually there from consumption.

"Consumption in Michigan" was the subject of a paper by Dr. Veenboer.

Dr. O. W. Gordon, of Council Bluffs, reported his disappointment in visiting various resorts, and spoke highly of New Mexico.

A report from Dr. A. Petin, of Las Cruces, N. M., formerly of Paris, was read in which he said they had almost constant sunshine, less than two inches of precipitation in twenty-eight months, and that consumptives sent there were all doing well.

A report on the Adirondack region was read, from Dr. Skinner.

Dr. B. W. James, of Philadelphia, contributed a paper on "Climate Maxims."

The climate of Costa Rica was presented by Dr. Buchanan.

Dr. A. S. Butler reported on the climate of Honduras.

"Texas as a Resort for Consumptives" was the title of a paper by Dr. Marshall.

Reports on mineral waters were presented from Las Vegas, Hot Springs, N. M.; Eureka Springs, Ojo Caliente Hot Springs, N. M.; Costa Rica and Londonderry.

Prof. I. N. Danforth gave an address on "Mineral Waters, their Analyses and Uses."

He said the profession was being imposed upon by imperfect and fraudulent analyses. In the first stage of Bright's disease he thought that Bland water should be used, and in the second Lithia waters.

Prof. W. S. Haines made a valuable report on Bacteria in Mineral and Potable Waters. In some mineral waters he found two bacteria to the cubic centimeter, and in some drinking water he found as high as 8000.

A large number of members were admitted.

It was reported that a Congress of Climatologists would meet in Chicago next year, and it was voted that the association meet with it.

The following officers were elected: T. C. Duncan, M. D., president, Chicago; J. F. Danter, M. D., first vice presi-

dent, Toronto, Canada; I. N. Danforth, M. D., second vice president, Chicago; W. P. Roberts, M. D., third vice president, Boston, Mass.; T. S. Hoyne, M. D., treasurer, Chicago; W. A. Chatterton, recording secretary, Chicago; J. D. Hartley, M. D., corresponding secretary, Chicago; W. W. Van Baum, M. D., Philadelphia; Prof. W. S. Haines, M. D., Chicago.

The full proceedings and papers will be published shortly and all members will be supplied with these valuable and interesting transactions. For further particulars address J. D. Hartley, M. D., Corresponding Secretary, 1204 Milwaukee Avenue, Chicago, Ill.—*Journal of the American Medical Association*, July 16, 1892.

RESOLUTIONS ON THE DEATH OF DR. T. G. RICHARDSON.

The following resolutions were passed by the Orleans Parish Medical Society June 25, 1892:

WHEREAS, It is our sad duty to record the death of our honored and esteemed fellow-member, Prof. T. G. Richardson, M. D., be it

1. *Resolved*, That in the death of Prof. T. G. Richardson we recognize the loss of one whose life and work had raised him to eminence in the medical profession of the United States; had given him a cheerfully accorded leadership in the States of the Gulf, and in his own State and city had rendered him the honored guide and counselor of our profession and our people.

2. *Resolved*, That in the discharge, through long years of his duty as a teacher, he was clear, conservative and faithful, and, above all, wise in the judgments born of a wide and carefully stored experience.

3. *Resolved*, That as a citizen he was faithful in the discharge of every civic duty; was untiring in his efforts for the advancement of knowledge and the public welfare, and, withal, practised a benevolence enriched by its lack of ostentation.

4. *Resolved*, That in the spotless morality of his life and the unswerving rectitude of his character we recognize a power which, beyond his knowledge and his wisdom, shall remain with those whose lives he touched as a permanent influence for the building up of all that characterizes the christian gentleman.

JNO. B. ELLIOTT, M. D.,

H. A. GABERT, M. D.,

F. W. PARHAM, M. D.,

Committee.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

LARYNGECTOMY.

Dr. J. Solis-Cohen exhibited a patient from whom the larynx and upper ring of the trachea had been removed for malignant growth projecting externally, and made the following remarks:

Nineteen years ago this patient, a teamster, then twenty-five years of age, found that he was having some hoarseness of voice, which soon became associated with dyspnœa. This dyspnœa increased in the course of three years to such an extent that he was hardly able to breathe. He then came under the care of Dr. Lefferts, of New York, who found a large papilloma in the larynx, which growth he removed piecemeal by intra-laryngeal procedures. Dr. Lefferts reported the case in 1876, in the *New York Medical Record*, and I pass around a copy of that journal showing a picture of the growth at that time. For ten years the man remained in continuous comfort. Then recurrence of his former troubles ensued, and he had more or less difficulty for several years, and underwent various treatments. About a year or so ago he began to be much worse, and in January he applied for relief at the dispensary of the Jefferson Medical College. At that time he was suffering with great dyspnœa, a good deal of pain, cough, difficulty of expectoration, and difficulty in swallowing. The picture of his larynx was almost exactly a reproduction of the picture that I have passed around, and which was taken in 1876—that is, sixteen years ago, with this exception: that the growth, which occupied a large portion of the left side of the larynx, almost occluding it, was white instead of red, and had not that characteristic papillomatous appearance. The growth had penetrated the larynx exteriorly, and projected externally in a mass larger than an almond.

The history of this case led me to believe it to be a redevelopment of papilloma *in situ*, and not a recurrence. The dyspnœa was very great, and I made an appointment to perform tracheotomy promptly; but being suddenly attacked with influenza, W. S. Forbes performed the operation for me at his own clinic, and inserted a tube. This precautionary tracheotomy was performed because I did not consider it safe to attempt a removal of the growth with forceps until we had provided a safety-valve below by means of the tube. Three or four weeks later I attempted to remove the growth by intra-laryngeal procedures. It was easy to catch hold of it with large forceps, and I removed a very curious looking structure which

looked more than an inch in length and one-third of an inch in width, much like a piece of codfish skin. After examining it I came to the conclusion that the forceps had grasped the tumor, but, unable to remove it, had peeled off the thickened epithelium. This was given to a microscopist to examine, and was subsequently reported to be a sarcoma. Finding that we could not remove the growth with forceps, we took the patient before the class, where, with the assistance of Dr. Forbes, I excised the external growth and then split the larynx and removed every portion of the internal growth, afterward scraping the parts thoroughly. The masses removed were subsequently reported to sarcoma. The case did well for four weeks, when recurrence took place, and in less than two weeks the growth became almost as large as at the time of the original operation. It grew more and more rapidly, and again protruded through the necrosed thyroid cartilages.

After explaining to the patient the dangers connected with a radical procedure for extirpation, and after consultation with the surgical members of the faculty, I decided to excise the larynx. This operation was performed on Friday, April 1, with the assistance of Professor Keen and of Dr. O. Horwitz, chief of the surgical clinic.

The day before the operation I had the opportunity, through the courtesy of Dr. Forbes, to perform the operation on an uninjected subject. Dr. Forbes at that time made a suggestion which was carried out in the operation, and the excellent result of which you will see presently. This suggestion was, that after the larynx was removed the anterior portion of the trachea should be split longitudinally for two or three rings, and that the lips so formed should be stitched to the skin anteriorly, so as to present forward and keep the trachea in a favorable position.

There was a good deal of difficulty in the operation owing to the cicatricial tissues and other changes of structure and relations of parts which had resulted from the previous operations. I was, therefore, unable to tie the laryngeal arteries before the extirpation, as I had proposed to do, but Drs. Keen and Horwitz looked after the bleeding while I went ahead with the excision. The incision was made everywhere through healthy structure. The diseased skin and enclosed morbid mass were circumscribed by elliptical incisions in sound skin, joining a vertical incision from the hyoid bone above and region of the tracheal canula below; and then a transverse incision was made at the level of the hyoid bone, so as to make a T-shaped incision and two lateral flaps. The incision was carried down to the periosteum, and the soft parts were then separated with

Allis' dry dissector, which answered admirably. During this time anæsthesia was carried on by chloroform through the tube by means of a funnel and an India-rubber tube. When the larynx had been separated from the soft tissues, and I could get my fingers around it, I removed the ordinary canula and inserted a tampon canula, to prevent, as much as possible, any entrance of blood into the air passages. For this purpose I used the von Trendelenburg canula, but not the Trendelenburg system. Trendelenburg uses a rubber bag inflated with air. Air or water-bags are very often opened by puncture during the operation. An hour or two before the operation I moistened a piece of ordinary surgical sponge and secured it around the canula, and over this tied a bulbous India-rubber tube. I have here the canula undisturbed; and although fifty-six days have elapsed since it was prepared, you see the tampon is still perfect, sufficiently pliable for immediate use.

The patient's head was lowered as soon as this canula was introduced, and anæsthesia was subsequently kept up through the tampon canula, which leaked a little despite all efforts to prevent it. The epiglottis being healthy, I made an incision through the hyo-epiglottic membrane, and cut the epiglottis square off. The larynx was then tilted forward. Knowing that there has been difficulty in nourishing patients after this operation, I determined to save the entire œsophagus, if possible, instead of severing it at the level of the cricoid cartilage, and by careful manipulation I was able to strip the œsophagus and the mucous membrane from the tips of the arytenoid cartilages and larynx down to the base of the first ring of the trachea without perforating it.

The larynx, with the first ring of the trachea attached to it, was then severed from the trachea, and the trachea was stitched to the skin in two flaps formed by the sides of the original tracheotomy incision, which had embraced the second and third rings. The soft parts were then brought loosely together with sutures, without any dressing in the pharynx; and a small, soft rubber stomach-tube was inserted into the stomach through an opening left in the upper portion of the dressing. This was inserted thinking that there might be a necessity to use it for introducing nourishment; but it was found unnecessary, and it did some harm. An hour had been occupied in the whole procedure—anæsthetization, operation and dressing. The patient was then put to bed. He was carefully watched. I stayed with him for sixteen hours; and during that time I instructed a number of young men connected with the throat and surgical clinics of the hospital how to take charge of the case. Two members of these staffs were with him constantly

for eighty hours. Twice during that time the man would have died had not skilled hands been present to remove mucus from the tracheal tube. It is to the close attention of these young men for the first eighty hours, and to the admirable service of our chief surgical resident, Dr. Hager, that this man chiefly owes his life, for the attention after such an operation is far more important in the clinical point of view than the operation itself, all-important as it is. There was a good deal of oozing along-side of the œsophageal tube.

On the third night this tube became detached and we did not re-introduce it. Enemata were used for four or five days, and then we gradually began to give food by the mouth. At each attempt at swallowing, a piece of gauze was applied above the tracheal wound and the parts were pressed close together while the patient swallowed. There was a little trickling for a few days, but this ceased. It was interesting to watch the œsophagus during swallowing, before the external wound contracted. It was easy to see that the œsophagus opened when the man took water. There has been some doubt whether there is a mechanical distention of the mouth of the œsophagus in gluttony, or whether there is some such action of the œsophagus itself. In this case it certainly did open to receive the water. The man has made an uninterrupted recovery. There has been no attempt made to use a voice tube, and for two reasons. In the first place, I know of no one in this city competent to make one, and in the second place, I do not wish to put anything into the wound that would irritate it until there remains no doubt in regard to the question of recurrence.

You will notice in examining this patient that there is now no connection between the trachea and the nose. I wish here to call attention to an important physiological point. Of late years a number of German surgeons—Aschenbach and others—and notably, MacDonald, of London, and Bosworth, of New York, have been making experiments in reference to the physiology of nasal respiration by the use of tubes, etc. They assert that the air of respiration becomes fully saturated with moisture in the nose, and that, consequently, being saturated when it enters the lung, it can receive no moisture from the lung. Therefore, they say, physiologists are wrong in stating that moisture is exhaled from the lung. In this case there is no connection whatever between nose and lung; and if you take a mirror and hold it over the tracheal opening you will see that it becomes covered with moisture. In this case the lungs do exhale moisture. Of course, here the conditions are different from the normal. I only wish to call attention to this point, as it seems to show that the older physiologists

ogists were right. There is still a small fistula above, which I think will close without difficulty, but it has no connection whatever with the trachea.

From the history of this case, I took it for granted at first that it was a papilloma-recurring upon the seat of a former growth; but when a portion of it was examined by a microscopist it was pronounced sarcoma.

After extirpation of the larynx the growth was pronounced to be a cylindrical epithelioma, or a destructive adenoma or adeno-carcinoma invading the arytenoid and thyroid cartilages as well as the soft parts. You see it here in the specimen, nearly filling the cavity of the larynx, proceeding from the left side mainly, but extending slightly to the right side and penetrating necrotic portions of both wings of the thyroid cartilage so as to present externally and involve the cutaneous surface likewise. Whatever it may be, there is no doubt of its malignancy.

The question whether benign growths are ever transformed into malignant ones is important. It is the generally received opinion that benign growths are sometimes, by further irritation, converted into malign tumors. A collective investigation into the subject by Semon, of London, has shown the fallacy of this opinion as far as it refers to laryngeal neoplasms. Certainly there was in this case no conversion of a papilloma into a malignant growth. The malignant growth became developed many years later upon the site from which a benign growth had been removed.

There is one clinical point that has been a revelation to me; and that is the freedom from pain, freedom from cough, and freedom from dysphagia. Should there be no recurrence in this case, we have every reason to be satisfied with the result. Should recurrence ensue, the patient will have been relieved from suffering for some time.

A number of years ago, when I investigated this subject, I was opposed to the operation in the main, as I am still. This is an exceptional case; and it is only in exceptional cases that laryngectomy should be performed. At that time Dr. Czerny, of Heidelberg, wrote to me that if I could only see some of his patients and witness how free from pain they were, I would believe that the operation was a justifiable one. This case verifies his remark. The patient is now happy; whereas for many months before the operation he had been miserable.

The man is wearing a single rectangular-like tube with as little paraphernalia about it as possible.

DISCUSSION.

Dr. Ralph W. Seiss—The only point to which I shall refer is in regard to what was said in reference to the conversion of a non-malignant into a malignant growth. I have seen at least two examples of papilloma transformed into malignant growths. One was an ordinary wart on the hand, which was removed, and subsequently recurred and developed into a typical squamous epithelioma, demanding amputation of the forearm. A second case was one of papillomatous growth about the external auditory meatus, which, under irritating and prolonged treatment, became converted into a malignant epithelioma. In another case, a small fibroma—so called—was, under irritation, transformed into a rapidly growing, round-cell sarcoma. There have been a number of similar cases reported. I think that it is well known that these “heteroplastic foci” are particularly apt to become malignant under continued irritation.

Dr. Ernest Laplace—In regard to the explanation of the different findings made in different examinations of the same growth, I would say that different portions of the growth are sent to different microscopists. Although throughout the growth we have the same pathological cause, we do not have throughout the growth the same tissue. One portion may be cancerous epithelial tissue, while another portion may be cancerous fibrous tissue. We must accept the view that there is very little difference between round-celled sarcoma, rapidly proliferating, and epithelioma; as far as prognosis is concerned, only one is epithelial tissue and the other fibrous. Given such a growth, and granting that different portions are examined by different microscopists, it is not wonderful that there should be some apparent discordance in the report. It only proves that the growth was malignant from the first.

INTERNATIONAL DERMATOLOGICAL CONGRESS IN VIENNA.

The second meeting of the International Dermatological Congress will be held in Vienna from the 5th to the 10th of September, 1892.

Many of the most distinguished representatives of dermatology and syphilography from all countries have promised to present papers, and the indications are that the meeting will be a great success from a scientific standpoint.

The committee on organization, through the president, Prof. Kaposi, has extended a cordial invitation to the members of the American Dermatological Association, and of the New

York Dermatological Society, and others interested in dermatology in this country to be present.

The membership fee (\$5) should be sent, with titles of papers intended for presentation, to the secretary for North America, Dr. Prince A. Morrow, 66 West 40th street, New York, or to the secretary general of the congress, Dr. Gustav Riehl, Wien 1-20, Bellaria Strasse, 12.

The Tri-State Medical Association of Tennessee, Arkansas and Mississippi will convene in annual session in Memphis, Tenn., on the 16th and 17th of November, 1892.

Correspondence.

TREATMENT OF MALARIAL HÆMATURIA.

To the Editor of the New Orleans Medical and Surgical Journal: SIR—The season has now come when cases of malarial hæmaturia, so-called, are most numerous.

In view of the fact that many young physicians will this summer and fall be called on to treat such cases for the first time, and that others have not been practising in one locality long enough to have hitherto committed themselves to the quinine treatment, I make this appeal.

I know from bitter experience just how hard it is to look people in the face and acknowledge: "If I had not given your son or daughter or husband or wife so much quinine he would have recovered from his attack of hæmaturia." And I can fully realize that a physician who has practised twenty or thirty years in the same locality, and who has seen members of almost every family in the neighborhood die under his treatment of malarial hæmaturia, will find it nearly impossible to believe such a statement of himself, much less to repeat it. Hence, while I wish to slight no one and fully honor and respect the convictions of such men, I also realize the futility of wasting argument or reason, theory or facts, upon them, and make my appeal more especially to the younger members of the profession, whose death roll is not too long for them to change their point of view.

When you stand by the bedside of your first case of malarial hæmaturia, you will have but little gleaned from the text

books to guide you; from the medical journals that you have been reading you will have two courses to choose between, diametrically opposite to each other.

The plan of treatment which has the most followers, especially the most followers of note, will tell you to attend to the patient's secretions, follow all the rules of careful nursing, and give large doses of quinine. The advocates of this plan argue that this is a malarial disease, that quinine is the remedy *par excellence* for malaria, therefore quinine is the remedy to be used in this disease. Q. E. D. Quite logical it sounds, too.

The other plan of treatment, whose followers are just becoming numerous enough to send in a minority report, tell you to give the same careful attention to all of the needs of the patient's condition, but to give no quinine. The advocates of this plan acknowledge that this disease is caused by malarial poisoning, but claim that quinine is poisonous to a person having malarial hæmaturia, that it will nearly always kill your patient, that it would be as logical to say, "Typhoid is a germ disease; bichloride of mercury is the best germicide, therefore large doses of bichloride should be given in typhoid."

They hold to the rule of Hippocrates—"First do no harm"—and are not willing to kill their patients in the cause of logic.

But they claim in the first instance what all can see in the second, that the logic is false. For while malarial hæmaturia is caused by malarial poisoning it does not necessarily follow that the malarial poison is present in the blood of the patient after this condition is produced. And if it is not, it would be as unreasonable to give quinine in such a case as to administer the hydrated oxide of iron in a case of arsenical paralysis.

It has long been noticed clinically that malarial hæmaturia has few malarial attributes; that after the introductory chill and rise and cessation of temperature the fever is slight and continuous unless quinine be given; that there is an almost universal lack of periodicity; that when there is periodicity in the discharge of bloody urine it merely follows periodicity in the administration of quinine; that when true malarial periodicity occurs, *i. e.*, in temperature (in rare and always mild cases), rises of temperature are not followed by changes in urine; that when quinine is given rigors, fever and increase of bloody discharge, as well as nervous symptoms, generally follow. And now the deductions drawn from these observations are verified in a case of malarial hæmaturia reviewed in a recent journal; * "very numerous examinations of fresh and stained specimens failed to reveal any parasite whatever" in the blood of the patient in this case. And if there are no

plasmodia in the blood of patient, of course he does not need quinine, even if it would do no harm.

If a man be struck with a club the surgeon does not seek to destroy the club, but to repair the damage done to his patient, and so it in this disease: the treatment must be reparative.

The urine must be cleared; this is best done with turpentine; the bowels must be kept open, preferably with a saline; the nourishment must be carefully attended to, and the tr. ferri chlor. will be beneficial. And then, to guard against renewed malarial poisoning during convalescence, we have a safe remedy in arsenic; and so the patient is allowed to recover. After recovery he will probably be able to stand quinine, if he should need it.

But this letter is not to offer arguments or cite cases, though 'twere easy to do.

Arguments, pro and con, have filled the medical press for years; those who believe have always something they can say, even if it has been said before; and a beginner, after reading the positive assertions on both sides of the question, ends in doubt and sides with his late professor of practice or his preceptor.

And as multiplied arguments may merely muddle, I offer a comparison of the results of the two plans of treatment, as reported each by its respective advocates. Results are more tangible, and, even with young scientists, are more to be aimed at than theories alone.

I appeal to you to use in your next case the treatment, the results of which, as given below, you would prefer if you yourself were the patient; or, if unable to decide for yourself, just show the patient this "deadly parallel" and leave the choice to him:

PROGNOSIS AND RESULTS PROMISED
BY ADVOCATES OF THE QUININE
TREATMENT.

1. A terrible disease.
2. From 20 to 50 per cent. of mortality may be expected.
3. Certain cases are so violent in onset as to be doomed from the beginning.
4. Relapses are the rule.
5. Convalescence slow.

PROGNOSIS AND RESULTS PROMISED
BY ADVOCATES OF THE NO QUININE
TREATMENT.

1. Tends to recovery.
2. No case need die if seen and treated within a reasonable time and no intercurrent or chronic disease be present.
3. No case however violent in onset is incurable from that fact alone.
4. Relapses do not occur except from too early reinstitution of quinine treatment.
5. Convalescence rapid.

Respectfully yours,

Green Grove, Miss.

E. H. MARTIN, M. D.

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COLLABORATORS:

DR. F. W. PARHAM.

DR. H. W. BLANC.

DR. A. W. De ROALDES.

DR. R. MATAS.

DR. JOHN DELL'ORTO.

Editorial Articles.

DEATH OF DR. S. D. KENNEDY.

On July 6, 1892, the spirit of Dr. Stirling DeVere Kennedy passed to its rest. He had long been a sufferer, and his early death, though not unexpected, caused a feeling of deep sorrow in all those whose privilege it was to know and appreciate his worth as a man and as a physician.

Dr. Kennedy was born in New Orleans thirty-three years ago. He was the son of T. S. Kennedy and Catherine Chew, daughter of Beverly Chew, a former collector of the port at New Orleans. He received his literary education at the Kentucky Military Institute and Georgetown, D. C. He studied medicine in the medical department of the University of Louisiana, and for two years was a resident student at the Charity Hospital. He did not engage in general practice, but at once proceeded to Philadelphia to perfect himself in ophthalmology. On his return to New Orleans, he devoted himself ardently to the practice of his specialty, in which his great skill was admired by all. He was appointed lecturer on ophthalmology in

the medical department of Tulane University of Louisiana, a place that he filled for six years. He was also a member of the State Board of Health from May, 1888, to May, 1890.

In 1889 he coöperated with Dr. A. W. de Roaldes in founding the Eye, Ear, Nose and Throat Hospital, which has now one of the largest clinics in the country, and where Dr. Kennedy unstintingly and cheerfully employed his superior skill in the relief of indigent sufferers.

His too brief life was a life of sacrifices, devotion to duty and sufferings borne with a cheerfulness and courage rarely found in one who knows that his days are numbered. For many years he had pulmonary tuberculosis, the progress of which was stayed for a while by a residence in a favorable climate and by judicious treatment. In time, however, his larynx became involved and the end was seen to be not far.

His qualities as a man and as a physician are fittingly set forth in the following resolutions adopted by the board of trustees of the Eye, Ear, Nose and Throat Hospital:

WHEREAS, The Board of Trustees have learned with profound sorrow of the death of their honored associate, Dr. Stirling DeVere Kennedy; and

WHEREAS, Dr. Kennedy was one of the founders and one of the most active supporters and friends of the Eye, Ear, Nose and Throat Hospital from its organization up to the time of his death, be it

Resolved, That in the death of Dr. Kennedy the hospital loses one of its most useful and devoted officers.

Resolved further, That the character of Dr. Kennedy requires no eulogy. As a scholar he had no superior in the branches of learning which engaged his attention. Quiet and modest, he was possessed of great capacity and earnestness, and his loss will be felt by the people for whom he zealously labored and who knew his worth and admired his ability and accomplishments. Profound in thought, he was recognized as the peer of those men who have stood in the foremost rank of his distinguished profession. In affectionate remembrance of our departed friend, this minute is made and directed to be spread upon the records of this board and a copy thereof

transmitted to his family with the respectful expression of the sympathy of this board in the great bereavement which they have sustained.

THE POLYCLINIC BILL.

Among the good and useful measures passed by the State Legislature at its recent session may be counted the Polyclinic bill. This bill empowers the Polyclinic to use the patients in the Charity Hospital for purposes of clinical instruction to graduates in medicine. The actions of the Polyclinic, however, are subject to the control of the Board of Administrators of the Charity Hospital. The Polyclinic staff will do for graduates what the Faculty of the Medical Department has been doing for undergraduates for more than forty years. The Polyclinic will not in any manner come into competition with existing schools, and the past conduct of the Polyclinic and the authority of the board give a guarantee that the newly acquired power of the Polyclinic will be exercised only so far as may be consistent with the welfare of the hospital patients.

THE CHOLERA.

Our sanitary authorities are again on the alert to guard against the invasion of the most frightful of modern scourges—cholera. The last epidemic of the disease so thoroughly aroused the nations of western Europe that it is hardly possible for the disease to gain a firm foothold in those countries. The state of feeling among our own people was clearly shown when it was reported that a fatal case of cholera had occurred at Saginaw, Michigan. Although it was denied that the case was one of cholera, stringent measures were adopted to prevent any possible spread of the disease; and when the case was clearly seen to be not choleraic, no one regretted the promptness and thoroughness of the measures adopted by the sanitary authorities. Our people are vigilant, and ready to do anything that science and common sense point out as necessary and advisable.

The present epidemic was first heard from in Meshed, Persia, which is a place of pilgrimage for Mohammedans second only to Mecca. The pilgrims carried the plague to many quarters, and it became impossible to conceal the existence of the pest, which the Persian authorities endeavored to do. The disease quickly found its way to Baku, on the western shore of the Caspian sea. Baku is the centre of the great petroleum trade; its inhabitants are drawn from many people, mostly ignorant; and all travelers refer to it as indescribably dirty. The town is in communication with many important cities of Russia, by way of the Volga river, which empties into the Caspian sea. With such an excellent breeding spot, and free communication with other localities, the cholera was not long in reaching Nijni-Novgorod, in central Russia, and some points along the Black sea. As Nijni-Novgorod is a great place for holding fairs, and does a large and constant business with surrounding cities, it is not surprising that the cholera should reach Moscow, which is distant only 276 miles by rail.

The reports that come from Russia concerning the cholera are meagre and unreliable. The press correspondents report a daily mortality of more than a thousand throughout the empire, but it is not easy to determine how these reports are made and telegraphed abroad in the face of the severe censorship over letters and telegrams that exists in the stricken empire.

The other nations of Europe have fortified themselves against the dread pestilence. Turning to our own shores, it is gratifying to know that the Atlantic ports are well provided with the means of repelling the unwelcome visitor, but we fear that the Canadian authorities are rather lax in the enforcement of quarantine and maritime sanitation.

CESAREAN SECTION.

Through the courtesy of Dr. J. E. French, editor of the *Ohio Medical Journal*, we are enabled to present to our readers, in an unabridged form and with the original plates, the

valuable article of Dr. Gustav Zinke on Cesarean Section. The operation described is one of the achievements of modern surgery. It holds out a better chance to the child than older methods, without lessening the mother's chances; and, in justice to his patients, attending obstetricians should not sacrifice the life of the child when improved surgery holds out such a hopeful prospect for both mother and child.

Abstracts, Extracts and Annotations.

MEDICINE.

ON THE TREATMENT OF ANÆMIA.

By JAMES F. GOODHART, M. D., F. R. C. P., Physician to Guy's Hospital.

Anæmia is a wide subject, and is a symptom of many diseases. I do not propose to deal with it when thus *symptomatic*, but only when it is a substantive affection. And, even thus, I shall not take it in its entirety, for there is anæmia on the near side of middle life which requires one method of treatment, and there is the anæmia which, on the whole, affects the declining half of life, which is styled *pernicious* and which requires a different handling. It is to the anæmia of young adults, and, almost without exception, of women—the disease that has received the name of chlorosis, but which is not always by any means chlorotic—of which I am going to write.

One may feel inclined to ask, "What is there in this subject that we do not already know?" To that I would reply: Probably, nothing; but it is a subject on which men who are entitled to an opinion differ considerably as to the right treatment, and therefore any one who has convictions on the subject, one way or the other, is at liberty to air them. Not so very long ago no less an authority than Sir Andrew Clark read a paper on this subject in which he contended that anæmia was the result of

the constipation which is its common accompaniment, and he advocated purgatives rather than iron as *the* remedy, although he *did* combine a little iron with his aperient pill. That paper traversed one of my most cherished convictions. There are not many occasions in medicine on which, perhaps, one can say, "I *know*," unhampered by any serious qualification. But, having been interested in these cases for many years, and having tested what I say in scores of cases, I venture to say I *know* that iron given properly will cure many of them and that attention to the constipation alone will not. I do not deny that the constipation is an important element in many cases, and that it may make the anæmia worse, but I am certain that it is not the primary factor; that anæmia is *not* essentially a result of fæcal absorption. But there are certainly some who think that iron will not cure all cases. Then I say, that is because one or two considerations are lost sight of, and, as regards iron, because it is not given properly.

Now, treading upon a man's pet corn is not a bad way of causing a little excitement; therefore, let me mention certain common ways of giving iron which, as regards this disease, are not what I can call giving it properly. Giving a dose of dialyzed iron three times a day is one of these. Many people are very fond of this preparation of iron; and when it was first introduced dialyzed iron seemed to me to promise well, for it was a mild preparation which might be expected to be taken without upsetting the digestion. I tried it extensively and came to the conclusion that it was of very little use when compared with other preparations. "It won't do any harm," as a celebrated physician once said of a remedy to a lady of my acquaintance. "Thank you," said she; "I did not suppose that it would, but that was not exactly my purpose in coming to you." To order dialyzed iron is, as far as I know, playing with the remedy and wasting time. The *mist. ferri comp.* of the British Pharmacopœia is an old-fashioned, but, as far as it goes, a good medicine; but, here again, to give an ounce of it three times a day does not satisfy the requirements of most cases for it only contains the equivalent of $2\frac{1}{2}$ grains of sulphate of iron in carbonate to the ounce, and, although the better for this, patients are not thoroughly renovated even after a protracted course of the drug. The sulphate of iron, again, is a good remedy, and has the great advantage that it can readily be combined with an aperient in a pill. But, good as it is, it has the drawback that it is difficult to raise the dose to the amount I contend these patients require, for it has a tendency to act as an emetic. However, it *can* be pushed, if care be taken to do this slowly and steadily, for, like sulphate of

zinc, tolerance is easily established and a sufficient dose can then be given. Some, again, are fond of the perchloride of iron, and it, also, is a valuable hæmatonic; but with it, even more than with the sulphate, the stomach is not tolerant of large doses in these cases, and, therefore, I do not give it. Some preparation, therefore, is wanted that can be given in *large* doses without disturbing the stomach, and, to my mind, such preparations are chiefly *two*: the saccharated carbonate of iron and the ferrum redactum, or reduced iron. There are numbers of people who will tell you that they can not take iron, but it is seldom, indeed, that they have any difficulty with either of these preparations. They may either of them be given in half-drachm doses or more three times a day, and they may be given in pill or powder or lozenge. The powder is the least troublesome, and there is seldom any difficulty in thus administering it, if the patient be forewarned that, although dirty to look at, it is not bad to the taste. There are many people who can not take pills; those who can not will nearly always take the powder, and those who can not take powders will take any amount of pills—indeed, the more the merrier. Perhaps I may be allowed to add that the pills should be made up with glycerine of tragacanth and coated with some of the soluble coatings now in use, lest they should pass through the intestinal canal unappropriated, and the remedy thus come unjustly to be looked upon as a defaulter.

But there is yet another point about the iron treatment that is often not sufficiently insisted upon, viz.: the *duration* of the course. Hundreds of anæmic people apply for treatment, and we ask, Have you taken iron? Oh, yes, say they, they are always taking it, and it does them no good. But when we come to inquire, they have taken a bottle or perhaps two, and then left off for a while. The average specimen of humanity still looks for his cure in his first dose, or, at least, somewhere within the depth of a six-ounce bottle; but it is needful to say that anæmia is not to be cured by so ready a fashion, and half the battle lies in a fair start. In dealing with these cases, I always ask them, Are you prepared to carry out the requisite treatment? They, of course, profess themselves ready to do anything; whereupon I make them promise to take their medicine continuously for six weeks. Half-drachm doses, then, of the saccharated carbonate of iron or of reduced iron, given regularly three times a day over a course of six weeks, I consider to be so successful that I never can find heart to waste time (as I believe it is, for the most part) on other means of treatment, whether it be by potassi permanganas, or what not. Nevertheless, iron is a

remedy that is not always successful in private practice. I have seen many cases, now, where I have been obliged to acknowledge that the iron treatment has been carried out in all respects properly, and yet the patient has not recovered her color satisfactorily. And in thinking the matter over there seems to me to be a difference in this respect between hospital cases and those in private. I look over the former and can not remember one that has failed, and the only difference that I could think of was this, that they are invariably put to bed as soon as they come into the hospital and that they are also fed with at any rate a reasonable quantity of nourishment. In the better-class patient it is too often considered necessary only to give so much physic; food and exercise being left to the individual discretion.

Happily, Nature has some pretty stiff automatic checks, and the breathlessness of the anæmic is one of them; were it not so, anæmia of this sort would be a far more fatal disease than it is. But how can these patients expect to get well when they are so bloodless that they have nothing inside them to do a day's work upon, and yet they attempt to do that work. And what is that day's work? Well, "there is nothing the matter with them," so they do, after a fashion, much as other people do—that is to say, they think or are told that fresh air is good for them, so they drag themselves out to shop and walk. It is quite common to find young ladies thus affected going to early services at church, visiting in parish work, and as to not going to a dance because of their ailment, it would never occur to them for a moment. But after all, their chief exercise and exhaustion comes, I am persuaded, from the quite unnecessary treadmill exercise they perform for the hundred and one things that they want which are downstairs when they are up and upstairs when they are down. And what do they do this upon? Generally no breakfast—a cup of tea they consider a sumptuous meal; a finger of meat, perhaps, for lunch, and perhaps again for dinner at the urgent importunity of their relatives; and if they are particularly well looked after these tiny meal are supplemented by an intervening sup or two of beef-tea, whose one grand virtue is that it has been stewed so long that you can "cut it with a knife."

To summarize, these cases, if at all far gone in the bloodless condition, require:

First, absolute rest in bed for ten days or a fortnight—three weeks is none too much for some cases—and they should not be allowed to take much exercise of any kind for the six weeks that their treatment lasts.

Secondly, they must be fed with good, wholesome food—

four meals a day—beginning with milk and egg, which can be taken in the fluid state, and thus stowed away almost regardless of appetite. Good meat and vegetables can soon be added, and each meal should see some addition until a reasonable quantity is taken.

Thirdly comes the iron, as already detailed; and

Fourthly, any mild aperient that may be necessary.

It is not my purpose to advert to the dangers that attach to the anæmic state. Whether they are few or many it can not be that this disease is an unimportant one, although it is so common and so generally remediable that one might well think it so. Unfortunately, it is so very common that the public have no idea of its importance as a disease, and therefore it requires some courage to send a patient to bed for a fortnight, and to prescribe a Lent where physic shall replace the accustomed fasting.

But as I am dealing with the point of curability of these cases, I should like to say that I have several times seen it stated that in distinguishing between pernicious and this form of anæmia that the pernicious form tends to relapse; the chlorotic form, not. This has not been my experience; quite the contrary. These cases frequently relapse after a time, and it is necessary to tell them that it will be so, and that at the first indication of pallor or breathlessness, or, it may be, amenorrhœa, they must return to their remedy for a short course of three weeks or so. It is a curious disease, and, I believe, has a large nervous element as a factor in its production; but this I feel sure of—that, by its obstinacy and its tendency to relapse, it betokens a rather important constitutional vice, and that it is not a mere intercurrent affection that is treated and done with.—*The American Journal of Medical Sciences.*

ON THE TREATMENT OF SYPHILIS, ESPECIALLY OF THE NERVOUS SYSTEM, BY THE SUBCUTANEOUS INJECTION OF PERCHLORIDE OF MERCURY.

By W. HALE WHITE, M. D., Physician to Guy's Hospital.

It is often so important to bring a patient rapidly under the influence of mercury, especially if he is suffering from syphilis of the nervous system—for irreparable damage may quickly be done to it—that I thought the result of the use of several hundred subcutaneous injections of perchloride of mercury might be advantageously placed on record. Calomel baths and mercurial inunctions are rapid in their effect,

but subcutaneous injection is much less trouble, an exact dose can be much more easily attained, and the patient is affected even more quickly, that, unless there are strong disadvantages, it seems, *a priori*, to be the best method of giving mercury for syphilis. It is of course, impossible absolutely to prove this, because cases of syphilis differ greatly in their response to remedies. It has always been urged against this manner of giving mercury that it produces hard, painful swellings which are liable to suppurate, and for this reason the method is rarely used; but by giving the injections in the way about to be described I have always succeeded in avoiding these complications. I am indebted to Dr. McCall Anderson's "Specific Nervous Diseases" for it.

The part selected for the injection is preferably the gluteal region, and if the patient is liable to bedsores, rather to its outer and upper part, for then he will not lie on the spot at which the injection has been made. If this region should be, from sores or any other reason, unavailable, or if many injections have been made into both gluteal regions, the outer and front part of the thighs and the biceps of the arm are suitable places. The needle of the injection syringe is plunged deeply into the muscles, and an eighth of a grain of hydrochlorate of morphine is injected. The syringe is then detached from the needle, which is left in the muscles, and an eighth of a grain of perchloride of mercury is injected through the needle. The solution of perchloride of mercury is made by dissolving the salt in distilled water. The strength of the solution used may conveniently be a grain to the fluid drachm; then eight minims contain fully an eighth of a grain. I have repeatedly asked the patients if they object to this method of treatment, and none of them have done so.

They say the injection is not very painful, and they do not mind the slight induration which occasionally results, and which passes off in a few days. Generally there is no induration, but if there should be, the site of injection must be shifted. I have always given one injection every evening and have desisted for a few days whenever the patient has shown any signs of salivation. At first, before and after giving the injection, I used to apply a piece of ice to diminish the sensibility of the part, as recommended by Dr. McCall Anderson; but I soon gave this up, as I found it unnecessary. My house physicians—Messrs. J. P. Pendlebury, J. M. Gill, M. B., and J. Fawcett, M. B.—have always given the injections themselves. The following are the cases in which during the past nine months I have used this method. They, I think, abundantly prove that the patient can be rapidly and

safely mercurialized by this means, and that it often quickly relieves syphilitic manifestations.

Case 1. Syphilitic affection of skin.—James D—, aged 28, was admitted on August 7, 1890, for a typical syphilide, having in some parts the appearance of late secondary, in others that of an early tertiary, eruption. Injections were given on August 10, 11 and 12, but were discontinued on the 13th and 14th on account of diarrhœa. The rash began to disappear on August 12. On August 15 the injections were resumed, and continued daily, with the exception altogether of four or five days, till September 16, when the patient was discharged cured. The impression derived from the case was that the rash cleared up remarkably quick.

Case 2. Secondary syphilis.—Mary A. V—, admitted December 16, 1890, for syphilitic headache, vaginal condylomata, a sore throat, and a secondary papular syphilide all over the chest and abdomen. After three injections of the perchloride of mercury the pains in the head and throat were much better, and the rash was comparatively faint. After seven injections the rash could scarcely be seen, and the throat was quite well; the headache and condylomata were much better. On January 5, 1891, the patient was discharged cured. Occasionally the injections were omitted, as she was easily salivated.

Case 3. Cerebral syphilis.—Frederick M—, admitted on June 21, 1890. He had had syphilis. On June 12, 19 and 23 he had attacks of convulsions on the right side of his body, each followed by unconsciousness. On admission he was found to be hemiplegic on the right side. He had injections of perchloride of mercury daily for a month, and took iodide of potassium internally. He soon regained considerable power in the hand, and when last heard of, six months after, he had had no more fits.

Case 4. Cerebral syphilis.—Margaret H—, admitted February 16, 1891. She had had syphilis. For some time past she had been gradually getting deaf. Four months ago the deafness rapidly increased; she became giddy, and began to suffer from severe headaches; in a month she was absolutely deaf. On admission, in addition to these symptoms, she had ptosis of the left eyelid and paresis of the left internal rectus, and a syphilitic eruption. February 18: Daily injections of perchloride commenced. 24: Syphilide almost gone; headache better. 28: Ptosis and headache less; injections omitted for four days on account of salivation. March 12: Ptosis and headache have disappeared. She can hear people walking about the ward. March 22: Left the hospital. All

her symptoms have disappeared except the deafness, and that is much better.

Case 5. Syphilitic myelitis.—Alfred C—, aged 26 admitted October 8, 1890. Contracted syphilis in 1884. A fortnight before admission he was attacked with paraplegia, pain in the back, a feeling of coldness down the legs, and loss of control over the bladder. This attack was accompanied by rigors and fever. On admission the chief symptoms were paraplegia and anæsthesia of the lower extremities with incontinence of urine, which was alkaline. The temperature was usually about 101 degrees F. He was given five grains of iodide of potassium thrice daily, and the bladder was washed out with an antiseptic solution. October 17: The temperature having fallen, daily injections of one-eighth of a grain of perchloride of mercury were begun. Sensation in the legs soon returned. He gradually gained power in them. Exaggerated knee-jerks and ankle clonus developed. Some of the lost reflexes returned. Six weeks after admission the urine became acid. Between October 27 and December 24 the injection had to be omitted twice, once for four days, and once for seven days, because he became slightly salivated.

He had nearly all his injections in the biceps of the arm, because the injudicious application of hot-water bottles before his admission had led to a large sore on each buttock. The injection into the biceps was more painful than into the gluteal muscles; it was found that after some fifteen or twenty daily injections into one bicep it became stiff and contracted with flexion of the elbow, but this passed off in a few days if the perchloride was injected into the other arm. February 11, 1891: Patient has had the injections daily into the thighs since the last note without any bad results. He is in every way better. April 18: Except when they have been occasionally omitted for a few days at a time, either because he was slightly salivated or because he had a shivering fit (he has had ague), the injections have been continued daily. He has regained considerable power in his legs. The urine is acid and the sores have nearly healed. May 1: Injections discontinued, as an acute bed sore has appeared.

Case 6. Syphilitic myelitis and peripheral neuritis.—John M—, who had been in the hospital for syphilitic paraplegia, was readmitted in July, 1890, with complete paraplegia, trophic bedsores, cystitis, and glossy skin of the fingers. On July 4, a daily injection of perchloride of mercury was commenced; he also had iodide of potassium. In spite of every treatment the bedsores and cystitis got worse, and he died on September 19, 1890.

Case 7. Cerebral syphilis.—Arthur M——, admitted March 3, 1891. He had had syphilis, and now suffered from headache, giddiness, transient attacks of blindness, and optic neuritis. During his stay of about three weeks in the hospital he had a daily injection of perchloride of mercury, and when he left his headache was much improved, and the giddiness and attacks of blindness had disappeared.

Case 8. Syphilitic peripheral neuritis.—Samuel R——, admitted February 11, 1891. He gave a history of syphilis. For the last three months paraplegia, accompanied by pain in the leg, has gradually come on. On admission he was completely paraplegic. He was ordered subcutaneous injections of perchloride of mercury. These were continued daily for ten weeks, except when they were discontinued for two or three days on account of slight salivation. He improved very much, and was able to walk about the ward with the help of a stick, and soon after left the hospital.

In the following two cases there was no history of syphilis, but the injections were given, partly because it was possible that some evidence of syphilis might have been overlooked, and partly because it is probable that mercury is beneficent for peripheralneuritis or myelitis, even when they are not syphilitic.

Case 9. Myelitis.—Elizabeth B——, admitted October 1, 1890, for paralysis and anæsthesia of the lower extremities, together with cystitis and retention of urine. Injections of perchloride were begun soon after admission, and were given daily. The sensation in the lower limbs soon returned, and in November the urine was acid. In December she got up, and in February she was able to get about the ward with help. She continued the injections till April, when she left the hospital.

Case 10. Peripheral neuritis (?).—Thomas B——, admitted January 19, 1891, for slight paraplegia and diminution of sensibility in the lower extremities. He had perchloride of mercury injections daily till he left, on March 11, much improved.—*Braithwaite's Retrospect.*

OBSTETRICS.

TREATMENT OF FISSURES OF THE NIPPLE.

Dr. Barton Hirst, of Philadelphia, in the *University Medical Magazine* for March, advises the use of an application of equal weights of castor oil and subnitrate of bismuth in the treatment of fissure of the nipple. The nipple and adjacent

parts should be thoroughly washed and disinfected before applying the ointment. One of the advantages of this application is that it need not be removed if it becomes expedient for the child to nurse at that breast. The ointment makes a smooth and flexible coating which not only serves as an efficient protective, but tends to reduce the pain and reflex irritation. For the mammary engorgement and pain that so frequently occur when the nipple becomes fissured, he advises the employment of lead water with laudanum, in addition to the ordinary sling-compress. The entire breast should be covered with a cloth wet with the lotion, and the applications should be repeated at short intervals. This line of treatment ordinarily prevents the formation of abscess. It is best to allow the unaffected breast alone to be nursed, and the milk from the affected side can be drawn off with the breast-pump. If it is imperative that the infant shall nurse at the fissured nipple, a glass shield with a rubber tip may be used.—*New York Medical Journal*.

Book Reviews and Notices.

A Practical Manual of Diseases of the Skin. By George H. Rohé, M. D., Professor of Materia Medica, Therapeutics and Hygiene, and formerly Professor of Dermatology in the College of Physicians and Surgeons, Baltimore, etc. Assisted by J. Williams Lord, A. B., M. D., Lecturer on Dermatology and Bandaging in the College of Physicians and Surgeons; Assistant Physician to the Skin Department in the Dispensary of Johns Hopkins Hospital. *No. 13 in the Physicians' and Students' Ready-Reference Series* In one neat 12mo volume, 303 pages. Extra cloth, price \$1.25 net. Philadelphia: The F. A. Davis Co., Publishers, 1231 Filbert street.

The requirements of the age are met by Dr. Rohé in this little book. No attempt is made to exhaust either the subject or the student, and the ground is covered in clear, succinct language. There is a plentiful lack of foot notes and refer-

ences, but the matter of the book is good and authoritative, for the author knows whereof he speaks. As a hand-book for students of dermatology it will prove useful and instructive, and, as such, we recommend it to our readers. H. W. B.

Kemp & Co.'s Prescribers' Pharmacopæia. A synopsis of the more recent remedies, official and unofficial, with a therapeutic index and a résumé of the B. P. additions, 1890. By a member of the Pharmaceutical Society of Great Britain. Second edition (revised reprint). Kemp & Co., wholesale and manufacturing chemists. Bombay, 1891.

This little work, from far off India, is a companion to the British Pharmacopæia. It is intended for the use of medical men in India, but it is such a handy little work that its usefulness is not confined to a colonial branch of the profession. The drugs are arranged alphabetically, which is very convenient for ready reference. About all the drugs worth knowing are mentioned. The book was compiled by a man who is constantly handling drugs, and it bears evidence of the thoroughness and condensing power of an expert. A noticeable feature of the book is the fairness and prominence accorded to such American proprietary articles as have gained a firm hold on the affections of the profession. *Ingluvin* is mentioned, and also the "Sanitas" preparations.

NOTES ON MEXICAN PUBLICATIONS.

Anales del Ministerio de Fomento de la Republica Mexicana, Tomo. IX. Mexico: Oficina tip. de la Secretaria de Fomento, Calle de San Andres, numero 15. 1891.

This volume has been received from the Central Meteorological and Magnetic Observatory of Mexico, and is the work of the distinguished director of that observatory, Dr. Mariano Barcena. The proper title of this volume is "A statistical essay on the state of Jalisco, with special reference to the data needed in the development of its agricultural resources and in facilitating the acclimatization of new industrial plants." The volume is one of a series which is being issued by the office of the "Secretaria de Fomento" (which is intended to fulfil the function of a Bureau of Agriculture) in order that the agricultural development of the republic may be assisted by the guidance of competent official experts. This volume, an 8vo of seven hundred and twenty-nine pages, is devoted to the considera-

tion of the descriptive and physical geography and census of one particular state, Jalisco, including a most thorough consideration of its orography, geology, hydrography, climatology, flora, agriculture, horticulture and acclimation of new plants in this state. The book is a perfect mine of valuable data and reflects the greatest credit upon the learned author. It is sincerely to be hoped that the good work so successfully begun by the agricultural section of the Mexican Bureau of the Interior will continue to be prosecuted for the benefit of all those who are interested in the progress and development of our sister republic.

We also desire to acknowledge the receipt of a valuable series of graphic charts, issued by the Meteorological Observatory of Mexico, which exhibit the monthly mortality of the Mexican Federal District, including the capital city, as contrasted with the data obtained from the Meteorological Observatory, viz.: the average atmospheric pressure, temperature, humidity, quantity of ozone, direction and velocity of wind. The last chart is a complete exposé of the *status* of the mortality as caused by specified diseases, and of the atmospheric conditions during the month, in this particular district. Nothing could be more satisfactory to statisticians and sanitarians than these beautiful charts. The directors of the observatory deserve our sincere congratulations on their good work. We can only hope that the sanitary authorities of our great cities, those of New Orleans included, will find it convenient to imitate the brilliant example of the government of the Federal District of Mexico, in thus graphically combining the meteorological with the mortality reports of their special districts.

The *Gaceta Medico-Militar* of Mexico publishes an official circular announcing a prize of \$100, offered by the President of the Republic, for the best essay dealing with the question, "Which are the diseases that the Mexican soldier simulates, and the best means of detecting them?" The prize is open to all the medical officers of the army, and the winner is to be favored with a better chance of promotion.

R. M.

Treatise on the Diseases of Women, for the Use of Students and Practitioners. By Alexander J. C. Skene, M. D. Illustrated with 251 engravings and 9 chromo-lithographs.

This work on gynecology is the fruit of long experience and careful study. It is not a compilation of literary extracts. The author's own experience in practice is related in simple and unmistakable language. The work is practical and shows much originality. The subjects are carefully dealt with, and

the plan adopted by the author of illustrating his ideas, not only with engravings but the relation of cases as well, is most commendable. In fact the greater part of the work is made up from the histories of such cases as bear upon the subject and adds greatly to the interest of the book.

The work is divided into three classes. The first comprises the diseases occurring between birth and puberty; the second class, those occurring between puberty and the menopause, and the third, those which come after the menopause. Much of the useless stock literature, only written, apparently, to swell the pages of medical books, is omitted. On the whole, it is about as near perfection as any written on the subject of gynecology. It differs in many respects from other works on this subject. This difference makes it all the more interesting, and is in itself a recommendation.

The first chapter opens with a detailed account of the methods of examination, instruments required, and general observations to be made, and offers some very practical suggestions.

Chapter 4 deals very clearly with flexions, and here the author shows the results of his observations, and the absurdity of treating these deformities with ante and retroversion pessaries. The methods of treatment described are plausible and worthy of consideration.

Chapter 8—Injuries to pelvic floor—an interesting chapter. Special attention is called to unobserved lacerations of the posterior vaginal walls, the source of much trouble and suffering. Operations for these lacerations are described and illustrated. The method of denudation for laceration of the perineum in all cases is not as favorable as that of Tait; a failure would result in loss of tissue and make a second operation more difficult.

Chapter 9 contains a description of a new method of operating for fistula in ano. It is similar to the operation for lacerated perineum.

The chapters following, on treatment of metritis and endometritis, contain nothing new or of special interest.

Chapter 29 demonstrates the abuse of pessaries, emphasizes the importance of frequent examinations to ascertain the position of the pessary, and the importance of knowing how to adjust it.

Chapter 20 gives the pathology of hypertrophy of the cervix and its treatment, and speaks of the frequent necessity of amputation.

Chapter 21 is full of interest concerning fibroma of the uterus. Numerous interesting cases are related showing the

results of local application of iodine. Treatment by electricity is fully described.

Chapter 25, on diseases of the ovaries, would be a complete chapter were the author more emphatic in declaring his opposition to the promiscuous removal of the ovaries. He admits that little if any good ever results from oöphorectomy. "Too often," says he, "lack of patience is the cause of the surgeons removing the ovaries with the hope of a rapid cure." Much valuable information is contained in this chapter.

The chapters which follow treat on the same subject, and are very interesting. The author most emphatically, but very justly, objects to beginners performing laparotomies. This *grave* operation, thinks Dr. Skene, the young surgeon should learn to perform and attempt only after long experience in assisting skilled surgeons. Were this advice heeded no doubt the mortality would be greatly reduced. The description given of this operation is thorough in every detail.

Chapter 31 deals with the subject of cellulitis, and gives the latest form of treatment.

Chapters 34 to 46, inclusive, exhaust the subject on diseases of the bladder. The author believes that malaria has a direct effect on the bladder, and that a distinct disease peculiar to malarial infection exists. If such be the case, why is this disease not met with in the south, where malaria is so prevalent? That malaria will aggravate an existing disorder of the bladder is possible, but that it should attack that organ when in a healthy condition is doubtful. The reviewer has seen several of these so-called casses treated by quinine, but alone it proved ineffectual, unless perhaps the trouble were caused from some nervous origin, in which case a sedative would have acted as well.

Chapters 46 to 54 treat of the diseases of the urethra, and like the preceding chapters is full of original and interesting matter. Chapter 50 describes fully the treatment of *fistula* of the bladder, with illustrative plates, and the relation of a number of interesting cases.

The author concludes with a chapter on the relative effects of uterine disorders to insanity. From his personal operations we conclude, and very naturally, that insanity often bears some part in the existing diseases of the uterus and ovaries, but seldom is the case reversed. This class of patients, says he, should be looked after and cared for as other mortals. Weakening of the mental faculties may dull the sense of local pain, but treatment will nevertheless prove beneficial.

The practitioner will find this an excellent work, answering the demands fully.

E. D. M.

PUBLICATIONS RECEIVED.

International Medical Annual, tenth year, 1892. E. B. Treat & Co.

Annual of Autopsies, designed for the use of hospitals for the insane and other public institutions. By J. W. Blackburn, M. D., 1892.

The action, therapeutic value, and use of the Carlsbad Sprudel Salt (powder form). By Dr. W. Javorski.

The Practice of Medicine. By M. Charteris, M. D. Sixth edition.

Transactions of the American Orthopedic Association. Fifth session, 1891, Vol. IV.

Diseases of the Eye. A hand-book of ophthalmic practice, for students and practitioners. By G. E. de Schweinitz, M. D.

A System of Gynecology. With 359 illustrations. Based upon a translation from the French of Samuel Pozzi. Revised by Curtis M. Beebe, M. D., Chicago.

Pyscho-Therapeutics, or treatment by hypnotism and suggestion. By C. Lloyd Tuckey, M. D. Third edition.

A text-book of nursing, for the use of the training-school, families and private students. Compiled by Clara S. Week-Shaw. Second edition.

The pathology and prevention of influenza. By Julius Athaus, M. D., M. R. C. P., Lond.

Pye's Surgical Handicraft: a manual of surgical manipulations, minor surgery and other matters. Revised and edited by T. H. R. Coule, F. R. C. S. 1892.

Diseases of the Nervous System. By Jerome K. Baudny, M. D., L. L. D. Second edition.

Beitrag zur Wurdigung der Medikamentosen Seifen. Von Dr. F. Buzzi. Hamburg und Leipzig: Verlag von Leopold Voss. 1891.

State News and Medical Items.

CHARITY HOSPITAL.

The regular monthly meeting of the Board of Administrators of the Charity Hospital was held on July 4, 1892, with the following members present, Col. G. W. Vincent in the chair; Messrs. John Keller, Geo. Seaman and G. W. Sentell; Mr. Marks, secretary and treasurer, at his post.

The minutes of the last general meeting and several special meetings were read and approved.

Mr. Keller stated it was highly gratifying to the board to note that two railroad companies had each sent \$100, unsolicited, for the ambulance fund.

Dr. A. B. Miles made a verbal report for the month of June. He stated that the work in the clinic department was highly satisfactory. The assistance the clinic is to the hospital is invaluable. Dr. H. D. Bruns had written, asking for two months' leave, commencing August 1. Dr. Miles recommended that it be granted. A letter had been received from Dr. Bloom, in which he states that his health is much improved. Dr. Miles recommended that Dr. Bloom's leave be extended. Dr. Bloom is at present in Colorado.

Dr. Miles further reported that the beds in the ambulances required to be repaired. He also drew attention to the bad condition of some of the streets, which renders ambulance service very difficult, and he suggested that the municipal authorities be requested to repair the streets designated by the doctor—Tulane avenue being one of the locations.

Col. Vincent, in reply, said that the commissioner of public works had his attention drawn to the bad condition of the street mentioned. Col. Vincent directed Mr. Marks to write to Commissioner Farrell again on the subject.

HOUSE COMMITTEE REPORT.

The house engineer reported that the sewer pipe connecting the hospital with the river had been broken at a point between the wharf and sugar sheds. The break had been caused by a large quantity of sugar in barrels being piled to a great height, which caused the soil to settle, breaking the pipe. The pipe has been repaired and is now in good order.

Mr. Keller reported the ambulance department to be in excellent condition.

THE POLYCLINIC BILL.

Mr. Seaman stated that he was under the belief that the Legislature thought that the bill as amended was agreeable to the Board of Administrators. He therefore moved that the subjoined be sent to Baton Rouge and read in the senate to-day:

NEW ORLEANS, July 4, 1892.

To the President and Members of the Senate, Baton Rouge, La.:

The Board of Administrators of the Charity Hospital in regular meeting this day adopted the following resolution that the secretary was directed to telegraph to the president and members of the senate with a request that it at once be read in open session:

Resolved, That the Board of Administrators of the Charity Hospital respectfully but firmly protest against the final passage of the Polyclinic bill even as amended, for the reason that it enforces by statutory and mandatory clause the right of access and practice within the hospital and abrogates the supreme authority of the board, with whom all such privileges should properly rest.

By order of the board,

EDWIN MARKS, *Secretary*.

The resolution was unanimously carried and ordered sent to the senate.

The meeting then adjourned.

REPORTS.

The finance committee reports the following income for June:

For ordinary services.....	\$2,336	57
Donations	200	00

	\$2,536	57
Cash balance June 1, 1892.....	42,255	33

\$44,791 90

Disbursements—		
Ordinary expenses	\$8,664	53

Cash balance June 30, 1892	\$35,127	36
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DR. MILES' REPORT.

Number of patients remaining in the hospital June 1, 1892.....	611
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Number of patients admitted—		
Foreigners	150	
United States.....	393—	543
Number of patients discharged		476

Number of patients died—		
Males.....	62	
Females	22—	84

Number of patients in hospital July 1, 1892—		
Males.....	400	
Females	193—	593

Daily average of patients during the month.....	635
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Outside consultations—		
Clinic, men and boys.....	2685	
Women and children	2100—	4785

FINANCIAL REPORT FOR JUNE, 1892.

Amount received from pay patients	\$478 00
Amount returned to pay patients.....	32 00
	<hr/>
	\$446 00
Received from gate fees	361 95
Received from burial certificates	\$17 00
Received from legal certificates.....	2 00— 19 00
	<hr/>
Amount paid over to Sister Agnes	\$826 95
There are at present eleven pay patients in ward 14.	

EYE, EAR, NOSE AND THROAT HOSPITAL.

The adjourned monthly meeting of the executive committee of the Eye, Ear, Nose and Throat Hospital was held on July 12, at the Whitney National Bank, President W. B. Schmidt in the chair, Dr. A. W. De Roaldes and Messrs. J. T. Hayden, Walter R. Stauffer and George Q. Whitney present, and Secretary Joseph A. Hincks at his desk.

The minutes of the previous meeting were read and approved.

The clerk submitted the following report for the month of June, 1892:

Number of patients refused admission by the clerk at the door, being able to pay for a physician, 27.

Admissions—In the eye department 221, in the ear, nose and throat department 194, total 415.

Consultations—In the eye department 1447, in the ear, nose and throat department 1129, total 2576.

Operations—In the eye department 28, in the ear, nose and throat department 76, total 104.

Chairman James T. Hayden, of the house committee, reported that the committee had held two meetings, with a view of framing a budget of expenditures, which, owing to the fact that the present occupant of the premises corner of Rampart and Customhouse streets, refuses to give possession before October 1, it has been impossible for the committee to go on in the contemplated work, which will have to be abandoned for the present.

On motion of Mr. Whitney, the president was authorized to try and make the necessary arrangements with Mr. A. Konrad, the owner of property now occupied by the hospital,

to be allowed to remain in the building at the expiration of the present lease, until such time as the repairs of the hospital building are completed.

A communication from Mr. William Oswald, secretary-treasurer and manager of the Southern Electrical Manufacturing and Supply Company, offering to send a man once a week to the hospital to adjust and keep the fans and motors in good order free of charge was read, and the offer accepted with thanks.

A communication from the Dun Agency, donating the March edition of their reference book, was read, and the secretary was requested to acknowledge the same with thanks.

President Schmidt reported on behalf of the committee appointed to call on Mayor Fitzpatrick to solicit aid for the hospital, that the committee had waited on the mayor, who said that in the present straitened condition of the city finances, while recognizing the invaluable services rendered by the hospital to the poor in general, and of this city in particular, yet he did not see where the money could be found in the city treasury to assist the hospital. He advised, however, that a communication for relief be addressed to the city council, which would take the matter under consideration.

Dr. De Roaldes read a letter from Dr. Philip Bergé, asking to be furnished with a certificate of service at the hospital.

On motion, Dr. DeRoaldes was authorized to furnish said certificate to Drs. Philip Berge and A. P. Boston, and to applicants recommended by the medical staff.

Chairman W. B. Schmidt, of the committee appointed to draft resolutions on the death of Dr. Sterling Devere Kennedy, submitted the following preamble and resolutions, which were unanimously adopted:

July 12, 1892.

At an adjourned meeting of the executive committee of the Eye, Ear, Nose and Throat Hospital, held this day at 1:30 P. M. at the Whitney National Bank, a quorum being present, the following preamble and resolutions were adopted:

WHEREAS, The board of trustees have learned with profound sorrow of the death of their honored associate, Dr. Sterling Devere Kennedy; and

WHEREAS, Dr. Kennedy was one of the founders and one of the most active supporters and friends of the Eye, Ear, Nose and Throat Hospital from its organization up to the time of his death; be it

Resolved, That in the death of Dr. Kennedy this hospital loses one of its most devoted and useful officers.

Resolved further, That the character of Dr. Kennedy

requires no eulogy. As a scholar he had no superior in the branches of learning which engaged his attention. Quiet and modest he was possessed of great capacity and earnestness, and his loss will be felt by the people for whom he zealously labored, and who knew his worth and admired his ability and accomplishments. Profound in thought, he was recognized as the peer of those men who have stood in the foremost rank of his distinguished profession.

In affectionate remembrance of our departed friend, this minute is made and directed to be spread upon the records of this board, and a copy thereof transmitted to his family with the respectful expression of the sympathy of this board in the great bereavement which they have sustained.

W. B. SCHMIDT.

DR. A. W. DEROALDES.

JAS. T. HAYDEN.

FRANK K. BARKER.

JOSEPH A. HINCKS.

On motion, the secretary was authorized to furnish the resolutions to the newspapers for publication.

On motion of Mr. James T. Hayden, seconded by Mr. William R. Stauffer, Dr. Henry Dickson Bruns was unanimously elected a member of the board of trustees.

There being no further business the meeting adjourned.

THE JOURNAL congratulates Dr. N. P. Moss, of Lafayette, La., on the arrival of a little girl in his family.

Dr. Samuel Logan has been appointed a member of the Board of Administrators of the Charity Hospital.

Dr. E. S. Poincy made a trip to Central America for the Board of Health.

Dr. A. K. Wilcox, of Gansville, La., was here (New Orleans) last month.

Dr. W. B. Powell, of Natchitoches, La., died on July 15, 1892.

The many friends of Dr. and Mrs. W. H. Blanc will regret to hear of the death of their infant son, Henry William Blanc, Jr., who died at Sewanee, Tenn., on July 15, aged four months.

Dr. A. W. DeRoaldes has left the city for two months' vacation.

DR. J. B. HENDERSON.—The many friends of Dr. J. B. Henderson will be profoundly grieved to learn of his death, which occurred at 1 o'clock, July 17, 1892. In his residence of fifty years in this city, he won the respect and affection of

thousands, for his was a true, unselfish soul, which always beat with sympathy for the suffering and afflicted.

INSTRUCTION IN HYGIENE FOR WOMEN.

The growing importance of hygiene is constantly being recognized. As evidence of this, the following remarks of Dr. James E. Reeves, delivered before the Chattanooga College for Young Ladies, speaks plainly:

The education of woman should be as many sided as possible, in order to fit her for the highest usefulness at home and in society. If she were as liberally educated in the arts and sciences as she is naturally honest and industrious, medical quackery and the mere pretence of medical knowledge would be starved out of existence by the scorn of low practices of deception and ill-gotten gains.

Her knowledge should at least embrace enough of physiology and hygiene, sanitary architecture and sanitary plumbing to enable her to make the distinction between wise men, knaves and fools—either in the person of the family doctor, the architect or the plumber—and give them her confidence accordingly.

In medicine she ought to know that all contagious diseases are specific in their character, and can no more spring up *de novo*—that is, spontaneously—than wheat, rye, oats or potatoes will make the harvest without the seed first having been sown. Again, she should know something about disease germs, how infinitesimal, how rapidly they multiply when they gain entrance into the animal body; that some particular forms double their number every hour, so that a simple germ or bacillus will have grown a family of 8,388,408 in the space of twenty-four hours.

With such information, she will have the full warrant to question her doctor closely when he tells her that she has typhoid fever, diphtheria, or other contagious disease, if she have not been exposed to such particular disorder, and that other like cases have not recently occurred in the neighborhood. The same general knowledge of the causes of disease will also assure her that neither sewer gas nor all the filth in Chattanooga can produce a case of typhoid fever, diphtheria, Asiatic cholera, yellow fever, or small-pox. Filth is the *nurse* of such diseases, not the *cause*. In other words, there must be an antecedent or parent case introduced from without to start the disease in a community. Typhoid fever and diphtheria have served to cover up more professional ignorance, and deceived more sick people and their friends, than all other mistakes in diagnosis put together.

MORTUARY REPORT OF NEW ORLEANS.

FOR JUNE, 1892.

CAUSE.	White	Colored...	Male.....	Female...	Adults	Children.	Total
Fever, Yellow							
“ Malarial (unclassified)....	4	4	4	4	5	3	8
“ Intermittent							
“ Remittent	3	2	3	2	4	1	5
“ Congestive	4	2	1	5		6	6
“ Typho	2	2		4	3	1	4
“ Typhoid or Enteric.....	4	2	5	1	6		6
“ Puerperal		1		1	1		1
Influenza.....							
Scarlatina							
Measles							
Diphtheria	5		2	3		5	5
Whooping Cough	3		1	2		3	3
Meningitis	7	3	6	4		10	10
Pneumonia	10	15	14	11	16	9	25
Bronchitis	8	4	8	4	4	8	12
Consumption	44	28	34	38	71	1	72
Cancer	14	2	7	9	16		16
Congestion of Brain.....	11	4	8	7	3	12	15
Bright's Disease (Nephritis)	8	5	10	3	13		13
Diarrhœa (Enteritis)	39	25	28	36	22	42	64
Cholera Infantum	40	12	28	24		52	52
Dysentery.....	6	2	7	1	8		8
Debility, General	1	1	1	1	2		2
“ Senile	16	10	9	17	26		26
“ Infantile	7	4	7	4		11	11
All other causes	195	103	152	146	183	115	298
TOTAL	431	231	335	327	383	279	662

Still-born Children—White, 21; colored, 27; total, 48.

Population of City—White, 184,500; colored, 69,500; total, 254,000.

Death Rate per 1000 per annum for month—White, 28.03; colored, 39.88; total, 31.27.

F. W. PARHAM, M. D.,
Chief Sanitary Inspector.

METEOROLOGICAL SUMMARY—JUNE.

STATION—NEW ORLEANS.

Date.....	TEMPERATURE.			Precipn. in inches and hundredths..	SUMMARY.
	Mean	Max.	Min.		
1	80	87	73	0	Mean barometer, 30.01.
2	74	82	65	.43	Highest barometer, 30.14, 30th.
3	72	78	65	0	Lowest barometer, 29.85, 11th.
4	74	84	64	0	Mean temperature, 79.
5	78	86	71	.21	Highest temp., 92, 11th; lowest, 64, 4th.
6	80	89	71	0	Greatest daily range of temperature, 25, 11th.
7	79	87	71	0	Least daily range of temperature, 7, 27th.
8	76	87	65	.49	MEAN TEMPERATURE FOR THIS MONTH IN—
9	81	90	72	0	1871..... 82.0 | 1877..... 81.0 | 1883..... 81.0 | 1889..... 78.0
10	82	91	73	0	1872..... 80.0 | 1878..... 82.0 | 1884..... 79.0 | 1890..... 81.0
11	80	92	67	.53	1873..... 80.0 | 1879..... 81.0 | 1885..... 82.0 | 1891..... 81.0
12	79	86	72	.50	1874..... 81.0 | 1880..... 80.0 | 1886..... 78.0 | 1892..... 79.0
13	79	84	74	.01	1875..... 80.0 | 1881..... 84.0 | 1887..... 78.0
14	78	83	73	.17	1876..... 80.0 | 1882..... 81.0 | 1888..... 77.0
15	78	86	70	.77	Total deficiency in temp'ture during month, 38.
16	78	84	73	.74	Total deficiency in temp'ture since Jan. 1, 304.
17	76	83	69	.48	Prevailing direction of wind, S. W.
18	79	85	73	.03	Total movement of wind, 5274 miles.
19	80	86	74	T	*Maximum velocity of wind, direction and date,
20	82	90	74	.31	39 miles, from S. E., 12th.
21	79	83	75	.03	Total precipitation, 5.46 inches.
22	80	86	75	.07	Number of days on which .01 inch or more of
23	82	88	76	T	precipitation fell, 17.
24	84	90	77	T	NET PRECIPITATION (IN INCHES AND HUNDREDTHS)
25	82	88	76	T	FOR THIS MONTH IN—
26	79	83	75	.09	1871..... 8.61 | 1877..... 2.57 | 1883..... 12 05 | 1889..... 7.62
27	78	81	74	.07	1872..... 5.34 | 1878..... 7.35 | 1884..... 8.60 | 1890..... 7.71
28	77	86	68	.53	1873..... 6.68 | 1879..... 2.96 | 1885..... 3 30 | 1891..... 4.45
29	81	89	73	0	1874..... 9.62 | 1880..... 6.43 | 1886..... 9.30 | 1892..... 5.46
30	82	90	73	0	1875..... 4.92 | 1881..... 2.84 | 1887..... 11.33
31	....	....	....	....	1876..... 6.20 | 1882..... 2.71 | 1888..... 9.09
					Total deficiency in precip'n during month, 1.31.
					Total deficiency in precip'n since Jan. 1, 5.76.
					Number of cloudless days, 5; partly cloudy
					days, 19; cloudy days, 6.
					Dates of frost, —.
					Mean maximum temperature, 86.
					Mean minimum temperature, 72.

NOTE.—Barometer reduced to sea level. The T indicates trace of precipitation.

* To be taken from any five-minute record.

G. E. HUNT, *Local Forecast Official.*

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

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No. 8.

Original Articles.

[No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a written order for the same accompany the paper.]

GRAFTING IN SURGERY.*

By S. W. PARHAM, M. D.,

Instructor in General Clinical and Orthopedic Surgery, New Orleans Polyclinic; Visiting Surgeon Charity Hospital, New Orleans, La.

Mr. President and Gentlemen—The treatment of ulcers and other surgical affections, and of operation wounds, which can not be closed by suture, has been so much improved by the modern methods of grafting that I have thought it might not too much tax your patience for me to run over their development into now recognized surgical procedures, and to make some remarks concerning the application and technique of these simple operations.

For the closure of defects in the tissues, plastic surgery has furnished us a number of methods. These might be thus classified:

1. Simple approximation, as in ectropion, epithelioma of lip, vesico-vaginal fistula, and the like.

2. Transplantation with a pedicle, either (*a*) from the neighborhood, by gliding, stretching or lapping, or (*b*) from a distance, as in rhinoplasty by the method of Taliacotius (from the arm).

* Read before the North Texas Medical Association at its meeting in Sherman, June 21, 22 and 23, 1892.

3. The successive migrations of Roux.
4. Transplantation without pedicle.

In the first four procedures maintenance of vascular continuity, complete or partial, between the flap and the furnishing part is necessary; in the last the transplanted tissue loses entirely its connection with the supplying region, its continued vitality and growth thereafter depending upon the establishment of vascular union elsewhere.

We would naturally suppose that plastic surgery proper must be quite ancient. Celsus, the Roman Hippocrates, we find speaking a century and a half before Galen of the restoration of ears, noses and lips from surrounding parts, even (according to Brandt) in the 9th chapter of the 7th book, entitled "De Medicina," prescribing rules for the operation. Notwithstanding this, these operations languished. But in the middle of the fifteenth century the Indian method of rhinoplasty was taken up by the family Brancha, continued by the Bojani and the Fioravanti, in which families exclusively these operations seem to have remained until the middle of the sixteenth century, the methods being practised in a secret manner. In 1597 Prof. Tagliacozza, the Bolognese, first established rhinoplasty on a scientific basis, practising it, however, not after the Indian method, but by taking a flap from the arm, now known as the Italian method.

Even in the eighteenth century, however, the operation was not permanently established, for Diones went so far in 1772 as to characterize rhinoplasty a "ridiculous fairy tale," and even the French Academy, under the presidency of Dubois, gave a negative answer to the question whether the building of a nose from the arm were possible. Lucas performed it first, without success, in London in 1803, and Carpué successfully for the first time in 1814. Though it has, therefore, suffered many vicissitudes, still plastic surgery had an ancient birth. (*Zeitschrift für Chirurgie*, April 1890, p. 332. De Curtorum *Chirurgia per Insitionem*. Brandt, *op. cit.*)

It was not so with the method of transplanting without pedicle, or more commonly called grafting.

It is true that certain facts, on which the methods of grafting are founded, had been long known before the operations

were attempted, just as important facts concerning the circulation of the blood had long been recognized in an indistinct way before the time of Harvey; but, as in the case of the circulation of blood it remained for Harvey to gather known facts, correct erroneous ideas, add the results of his own investigations and formulate all into a coherent and intelligent description, so, as to grafting, it required the genius of one man to work out the fundamental principles and practice of this valuable addition to surgical therapeutics.

It might be interesting to note the observations which had been made prior to the time when Reverdin made known his discovery in a paper before the Surgical Society in Paris:

1. Marinus reports Rudiman as saying that in India the belief in the possibility of reunion of a *cut-off* nose, if replaced, was so strong that the executioner was compelled to throw the nose into a brazier, in order to prevent readjustment.

2. Experience similar to that of Hoffacher in Heidelberg, who mentions that noses completely severed in the student duels were replaced and grew, even relating one instance where a dog seized a fallen nose and ran off with it, but the dog being pursued and caught, the nose was secured, washed, and tacked on to its owner's nasal stump, where it formed an attachment and permanently united, much to the joy of the embryo duellist.

3. Bits of finger, lopped off, have, when replaced, survived.

4. Hunter's famous experiment of introducing a spur into a cock's comb, where it not only adhered but grew with greater activity than the one left behind; and he succeeded, after numerous attempts, in transplanting to a cock's crest a human incisor tooth.

Attention might here be called to the numerous operations in plant grafting. Though some very marked similarities are to be observed between animal and vegetable grafting, they nevertheless differ in some important respects (No. 3, see Brandt in *Deutsche Zeitschrift für Chirurgie*, Band 30, Heft 4, u. 5, p. 334). Thus vegetable grafting is rarely, if ever, done to close a defect, but rather to get a growth possessing

characters quite different from the parent stock, whereas animal grafting is only undertaken to close a solution of continuity, and these grafts only grow until the gap is healed, whereas in vegetable grafting there is practically no limit to growth.

These observations should have earlier, however, led to practical results in animal grafting.

5. Teeth were also transferred successfully from one mouth to another. But notwithstanding such significant observations and experiments, surgeons only slowly recognized the facts that—

(1) Severed parts do not immediately lose their vitality, and

(2) With certain time limits these parts maybe implanted and grow elsewhere.

In 1847 Dr. Frank Hamilton proposed to a boy of fifteen years of age to attempt the cure of a large ulcer by planting upon its centre grafts (?) of skin taken from elsewhere. The operation was declined at the time; it was not until January 21, 1854, that he actually practised the operation. The operation was successful, the ulcer healing and remaining well as long as he was under observation. I shall not, however, dwell upon this operation of Dr. Hamilton, since it can in no manner entitle him to the honor of being the originator of grafting. His operation was really a plastic operation, since his graft always had a pedicle, was always smaller than the sore to be covered and was planted in the centre.

To Reverdin, an interne in one of the Paris hospitals, is due the credit of introducing and establishing on a firm basis this procedure of grafting, which up to his time had remained in the domain of fable.

His discovery was made known in a paper read December 8, 1859, before the Surgical Society of Paris. He called his method “Greffe Epidermique.” It consisted in taking very small pieces of epidermis (horny and mucous layers) and planting them in a granulating surface.

The way in which he was led to make his experiments is interesting. This can best be explained in his own words, translated from his paper in the *Archives Generales de Medecine* for May, 1872:

“ It is a long time since people have observed the spontaneous formation of cicatricial islets in certain wounds, and they have observed that these islets abridged materially the duration of the cicatrization. It was an observation of a case of this kind which gave me the first idea of epidermic grafting.”

This clinical observation suggested his experiments. The following is translated from his famous paper:

“ If a graft be placed in the centre of a raw surface, and leads to the formation of an island of epidermis, the marginal cicatrix, when it arrives at the border of that island, will find a part of its work done; if, instead of one islet, we have, for example, succeeded in forming ten, one can readily understand that the duration of repair will be considerably shortened.”

He then narrates the results of his experiments, discussing in detail the technique of the method and its applications, and explains his theories. The paper was referred to a commission, consisting of Guyon, Chassaignac and Despres. The report was rather unfavorable, but the paper and the discussion which followed attracted great attention and many set to work to repeat his investigations.

Pollock, of London, successfully grafted in May, 1870, a large burn, forty by five inches, on the buttock and thigh, and Lawson in 1870 relieved an ectropion by slitting and grafting the gaping space. It reached America through Mr. Pollock in 1870, when Hamilton and others began to employ it extensively.

But it excited the greatest interest in France. I shall not weary you by referring to the various views of the numerous surgeons who practically tested Reverdin's suggestions. But I must refer to the valuable observations of Ollier, since they antagonized some of the theories and teachings of Reverdin, and foreshadowed some of the important modifications of the original method now practised all over the world.

But it is necessary to mention some of the essential features of Reverdin's plan:

- (1) He used *small* grafts.
- (2) He took only the epidermis, and
- (3) He believed that, not only was the cicatrization with

grafting much hastened, but that also the cicatrix was less contractile and much more durable.

On March 18, 1872, Claude Bernard read before the Paris Academy of Medicine a note for Mr. Ollier on grafting.

"The facts which I have the honor," says Ollier, "of submitting to the Academy show that not only microscopic pieces of epidermis can be transplanted, but large strips of skin, formed not only of the superficial layer of the skin, but of the whole thickness of the skin.

"In place of a seed bed of small fragments of epidermis, I perform veritable skin transplantations. I do not confine myself to sowing on the granulation-surface small epidermis-producing islands; I cover by means of large strips, several centimetres square, a greater or less extent of the surface, whose cicatrization I wish to hasten. I do not, then, seek solely to hasten the natural 'epidermization' of the surface; I close it by a cutaneous covering obtained elsewhere and which, once grafted, forms a limiting membrane altogether different from ordinary cicatrices." "When one," he continues, "transplants small particles of epidermis or of dermo-epidermis, he hastens without doubt, in a certain measure, the cicatrization of the wound, but he does not obtain a cicatrix differing from that which would be naturally produced.

"It is the same fundamental process, the same structure; they have the same properties as cicatricial tissue. * * * It has the same contractility and by consequence the same inconveniences from a surgical point of view."

In order to overcome certain objections in the taking of large pieces of skin, he took advantage of an experimental fact which he had communicated to the academy ten years previously. He applied a mixture of salt and ice to the skin to be removed, and was able to remove the whole thickness of the skin without pain. Mr. Ollier made a second communication to the Academy of Medicine on April 2, 1872, insisting upon the surgical applications and the practical details of the operation. He thought the connective tissue of the skin played the chief role in this method of grafting. The proof of it was that a fragment of connective tissue, for instance, a piece of periosteum, could be successfully grafted on the sur-

face of an ulcer. For the relief of cicatricial contraction, he removed completely the nodular cicatrix. This he considered of the greatest importance.

In the June, 1872, number of the *Archives Gen. de Medecine* Reverdin answered some of these objections of Ollier's.

After referring to the result of his histological studies of the subject, he remarks: "They demonstrate, I think, that from that point of view at least the name epidermic graft is justified, the derma playing only a secondary role in the adherence of the pieces and having nothing to do with the formation of the cicatricial islands. If I insist upon these facts," says he, "it is because I believe, and I think I have demonstrated, that from the point of view of results small grafts are superior to larger ones, and that from the point of view of pain and possible accident they are certainly preferable."

In reviewing this discussion, I must say that in the lights of recent experience, as I shall show later on, Ollier had decidedly the better of the argument. I believe that while the epidermic grafts materially hasten cicatrization they do not effect a healing as far in advance of the natural mode of closure, as to stability and absence of contractility, as Mr. Reverdin thought. And further, one of Reverdin's strongest arguments against Ollier's position was his frequent failures. But the methods and technique of grafting have so much improved since 1872 that Ollier's position "from the point of view of results" is now completely sustained.

There are many interesting points about the methods of Reverdin which I should take up if I had more time. I will only mention the view most prevalent, that not only do these little epithelial grafts seem actually to proliferate themselves, but they exert some catabiotic action on the embryonic granulation tissue, converting it into an epithelial tissue of the same nature as the grafts. And thus it acts upon the more or less distant margin of the ulcer, causing the epithelial border to shoot out processes into the ulcer toward the oncoming island growths.

Before discussing the advantages and technique of the more recent and advanced methods, it will be well for us to consider the sources of the material for grafting.

L'Etievant's classification is convenient and concise:

Grafting may be—Auto-epidermic (from the patient), hetero-epidermic (from another), or zoö-epidermic (from an animal).

In any case they may be obtained in various ways. Thus, according to Hamilton, Fiddes, of England, “claims to have succeeded equally well by scattering upon the open ulcer epidermis scraped from the skin with a *dull* knife,” and Dr. Hamilton thinks he has succeeded in one case by soaking a piece of finger nail in warm water and inserting it into fresh granulations, “where it caused the growth of a thick cuticle.” (Hamilton's Surgery, 1886, p. 35.)

Dr. J. T. Hodgen, in Ashhurst's Encyclopedia of Surgery, mentions his use of “dry epidermic scales scraped from the thick cuticle of the foot,” and of flakes and sheets of detached epidermis, and remarks that they gave excellent results. Dr. Biebach, at his suggestion, made comparative tests of the two methods, the dermic and the dermo-epidermic. He found epidermic cells answered quite as well as the deep grafts. Dr. Scudder also made experiments, using “old, dry scales of loose epidermis” and thin shavings of corns. He preferred the corn shavings to any he had tried, and Dr. Hodgen remarks, “his results have been as good as I have ever seen, where more deeply cut grafts have been used.”

The skin of negroes has been also used upon the white man and vice versa, and there has been great difference of opinion regarding the question, whether the skin retained its original color or gradually acquired that of the patient receiving it. Mr. Pollock failed to generate skin with colored pigment by transplantation from the negro, but Dr. Hamilton deemed the following remarkable statement worthy a place in his valuable book on surgery, published in 1886. “According to the *New Orleans Picayune*, a somewhat doubtful authority in matters of surgery, Dr. Nicholson has succeeded, and his white patient is in imminent danger of becoming black, inasmuch as above two-thirds of the arm is already completely negroed.” (We should like to know who Dr. Nicholson is.)

I have not myself made any experiments in transplanting from one race to another, but it seems to me that at the worst

it could only affect the area actually covered in by the growth of the epidermic islands. But even this is sufficiently disproved by such cases as that of Maxwell's, referred to in the article on skin grafting in the *Encyclopedia of Surgery*.

Prof. Thiersch, of Leipzig, remarked at the meeting in 1888 of the German Surgical Congress that he had stated at a former congress that such transplanted skin retained its color, but further observation had shown him that he was in error. Histological study by Karg showed that the belief that the pigment is reproduced in the rete is incorrect. Pigment is brought to the rete by wandering cells loaded with pigment from the deeper strata. Therefore, it follows that skin transplanted to the negro must become pigmented, while the contrary becomes true when the pigmented skin is cut off from the supply of pigment." (*Annals of Surgery*, January, 1889, p. 74.)

It would thus seem to be a safe cosmetic procedure to transplant from one race to another, whatever other good reasons there may be against it, as disease, or suspicion of disease, in the person furnishing it.

Dr. Leale, of New York, has used warty tissue. The skin from an amputated limb has been successfully used in a considerable number of instances, and I have myself used a prepuce (just circumcised) without success, it is true, because the ulcer was an unfavorable one, but it is well worthy of further trial. It is astonishing how much surface it will spread over if subjected to some pressure. The mucous surface must, of course, be trimmed away.

Even the cadaver has furnished skin which has been successfully grafted in numerous instances.

Of animals, the following have been the sources of grafts, successfully applied: Rabbit skin, five times, with four successes, by Cadogan-Masterson, using pieces as large as a silver quarter; also by F. C. Wilson. Rabbit and pig skin by Mynter.

Pig skin by Ranau. (Large burn, 306 grafts from patient and 20 from pig.)

Skin from under wing of chicken, three cases by Redard. The inner membrane of a hen's egg, by F. C. Wilson, reported by Ashhurst.

The gills of a cock, by Alramirano, of Mexico. The

skin of the frog has been used by a great many, including myself in four cases, with one success (on spongy bone) and two partial and temporary successes. The question of vitality of grafts is an important one, because the longer they will survive the more extended will be the field of applicability.

Stephen Smith reports having removed seventy-five grafts from a limb more than two hours after amputation, and seventy-three formed adhesion and grew. (Sajous' Annual, 1889.)

Dr. Girdner, of New York (see Hodgen's article on ulcers in Ashhurst's *Encyclopedia of Surgery*), grafted numerous spots on an extensive ulcer in a boy of ten with skin taken six hours after death from a healthy young German, who had committed suicide by cutting his throat. Dr. Brewer, of Norwich, found grafts would adhere and survive as long as thirty-six hours after removal.

Reverdin observed one morning in lifting off the strips of plaster a few grafts adhering to several of the strips. These were again placed on the ulcer, where they adhered; these grafts had been put on the previous evening.

Paul Bert, in Paris, succeeded in having the several tails of rats to unite $3\frac{1}{2}$, $7\frac{1}{2}$, 16, 26, 48, 62, 64 and 72 hours, respectively, after severing. Ollier succeeded with periosteum twenty-four hours after removal.

Georges Martin's experiments showed that even 108 hours after removal some grafts retained vitality. At low temperatures they survived much longer. He found the general rule that they retained vitality in inverse ratio to the temperature. Moisture also interfered with their resisting power. These points are important, since it would permit the use of freezing mixtures to deaden the sensibility of the part furnishing the grafts. Then, too, if at the time of an operation no cases for grafting could be gotten ready the skin could be kept until convenient opportunity offered for placing them.

I propose now to call your attention to some of the important advances made in the transplanting of skin:

After Ollier, the most important communication on this subject was made by Thiersch, of Leipzig, in 1874.

Thiersch's procedure rested upon his observations of the "Modes of Healing of an Ulcerated Surface."

He states that the healing of a granulating surface depends upon two factors: (1) "The changing of the soft, succulent blood-carrying granulation papillæ into the bloodless, dry, cicatricial papillæ, a result which brings about a diminution of the surface and the drawing together of the neighboring parts, and (2) the covering over of the contracted papillæ with epidermic cells. If, now, skin is placed on granulations which have not reached the maximum of contraction, 'the process keeps up under the transplanted skin,' and there results the drawing together of the parts with all the evils of cicatricial contraction." If, on the other hand, the skin be applied to a surface where the maximum of contraction has been reached, "a further contraction will not take place, but the succulent granulations remain under the healed skin and the slightest mechanical irritation" may cause hæmorrhages or exudations and the falling off of the skin which has been placed over them.

Both bad results of skin grafting would seem to be due to the construction of the granulation tissue. Thiersch's investigations show two layers in granulation tissue, a lower, denser layer, made up of horizontally running blood-vessels, and the superficial layer, made up of the vertical vessels coming off at right angles to the deeper layer. The vertical vessels are the real granulation vessels, and play the important role in the shrinking process. Thiersch, therefore, completely removes this layer.

Since this method gives now results in surgery which were not even dreamed of by Reverdin and his successors, results, indeed, that have almost revolutionized certain departments of surgery, I shall describe it more in detail. For much of what I shall say I am indebted to Dr. Urban, assistant in the Leipzig clinic. His article is published in the Thiersch Festschrift of the *Deutsche Zeitschrift für Chirurgie*, 34, Band, 1892.

Since Thiersch's communication on Skin Transplantation to the German Surgical Congress, in 1886, his method has been extensively practised in Germany.

The method of Thiersch, says Urban, is distinguished from that of Reverdin by the two following characteristics:

1. The skin must be placed on a fresh surface, either of a wound or of one from which granulations have been removed. Reverdin placed them on a granulating surface and believed a mistake to place them on a fresh wound.

2. The pieces of skin are taken as thin as possible. (In this respect the distinction is one without a difference, since Reverdin's consisted only of epidermis—"Grefte Epidermique.")

We might more correctly add, or substitute, the distinction based upon the size of the pieces, Reverdin using extremely small, Thiersch's being limited in size only by the necessities of the case.

In Thiersch's Clinic in Leipzig the method has been employed in 350 cases—Plessing very thoroughly reported all cases up to October 1, 1886, Urban completing the report from this date to October 1, 1891. The operation was carried out in the greatest variety of cases, as will appear from the following table compiled by Urban.

The table is arranged under eleven classifications:

Tabular Statement of Cases of Transplantation of Skin in Thiersch's Klinik up to October 1, 1891. Compiled by Urban.

1. Injuries, including complicated fractures and tearing of skin with or without muscle injuries.....	43
2. Burns (large burns of 3d degree).....	10
3. New formations (tumors)—	
Carcinoma mammæ	17
Carcinoma of lip.....	10
Carcinoma of head.....	2
Carcinoma of forehead.....	5
Carcinoma of face	9
Carcinoma of lids	10
Carcinoma of nose	12
Carcinoma of trunk and extremities.....	2
Sarcoma	12
Acne rosacea.....	3
	— 82
4. Plastic (to cover the defects made by taking flaps)—	
Nose.....	5
Lips	2
Eyelids	6
Urinary bladder	1
Penis	1
	— 15

5. Nævus.....		
6. Contractures and cicatrices—		
Finger contracture	6	
Axilla.....	2	
Back of hand.....	1	
Keloids	4	
	—	13
7. Necrosis—		
Tibia	20	
Fibula	1	
Femur	4	
Humerus.....	1	
Radius.....	2	
Metacarpus	1	
	—	29
8. Results of inflammations—		
Septic	2	
Bubo	2	
Syphilitic	2	
Erysipelas	5	
Tubercle.....	4	
	—	15
9. Lupus		26
10. Varicose ulcer of leg		75
11. Miscellaneous, such as decubitus, empyema, exostosis.....		36
	—	
Total		350

In these cases, the large majority was successful. Indeed, as I can testify from personal experience, success, under proper care, is almost uniform in possible cases. Healing after operations, not otherwise to be attained, is rapid and satisfactory.

It will be interesting to give some details of the method. This I will do, for convenience sake, in categorical form.

1. The surface must be brought into aseptic condition. Operation and fresh wounds are already so. Infected wounds must be made so.

2. The operation must be aseptic, only sterilized fluids and dressings being used. Antiseptics irritate. Urban discusses this point at length. Sterilized salt solution 6 per 1000 is the best.

3. Granulating surfaces must be brought into a condition with following characteristics: (1) The granulations must be firm, and little inclined to bleed. (2) The ulceration must be reduced to a minimum and all necrotic parts must be eliminated. The surface must look dry and even, not moist and shiny. (3) All surrounding inflammation must have subsided. (4) The granulations must be removed. This may be done either by scraping or with a razor, taking off the granulations

in strips, including the margin. I prefer the razor, as making less traumatism. Thiersch originally recommended scraping or curetting; this is now abandoned in his clinic for the razor.

4. The skin strips, whether for ulcers or other surfaces, are taken also with the razor. The length and breadth are of little consequence. Urban prefers a width of two-fifths to four-fifths inch. The length is best that of the ulcer. They should be as thin as will permit their handling.

It is best to place them directly from the razor on to the wound, or in some cases from a microscopic spatula. They must overlap one another, be imbricated. No raw surface must be left. The strips can be nicely spread out by laying over them smooth pieces of *moist* gauze, and firmly but evenly pressing it down without rubbing.

5. My plan for dressing is as follows: Lay the gauze all about the surface, but nowhere touching the edge, or a hole large enough may be cut in the gauze, and the hole to lie over the defect. Strips of sterilized oil silk (washed off thoroughly with *sapo viridis* in alcohol, then placed in 30 per cent. carbolie water) are now to be laid smoothly across.

The advantages of this are apparent: (*a*) the silk does not stick by drying to the edges of the defect; (*b*) the secretion (blood and serum) is not retained under the silk. The dressing is then applied over this and a heavy layer of cotton firmly bandaged on. I find this superior to any plan I have seen recommended.

6. The skin should always be taken from the individual himself, in Urban's opinion, never from another and never from the cadaver. (1) Risk can never be entirely eliminated. (2) The damage to the individual is not a permanent one; the marks after a time almost disappear. (3) The skin of old and marasmic people, and even of the deceased, is as good in the individual case as that from the most vigorous person.

7. Urban (and most surgeons) prefer to take it from the thigh, (1) because it is a more abundant source; (2) because this part is always clothed. The arm will show the scars should there be any, although cicatrix rarely forms; after a few months scarcely a trace remains.

8. It is very important that the grafts should not become

displaced during the first twenty-four hours, for in this time adhesion usually takes place. If at the end of twenty-four hours the wound is doing well, a good healing is almost sure. The wound should, therefore, be dressed after twenty-four hours, and if any graft is out of position a new piece should be taken and put on at once.

9. As to giving an anæsthetic, Urban's directions accord with my own experience; it must usually be given, but it may frequently be left dependent upon the patient's choice.

10. As to the control of hæmorrhage something needs to be said—Fischer, of Strasbourg, in 1879 and 1880, recommended the bloodless method. He used the Esmarch bandage on both the supplying and the receiving part, where possible, leaving the band on the latter part until the dressing was completely applied. No bleeding occurred in such cases. I have used it with advantage in some cases, but it is rarely necessary, since the hæmorrhage can usually be controlled by pressure.

The question as to what tissue surfaces may be successfully implanted with these skin strips is an interesting one. The abundant experience of the Leipzig Clinic enables us to answer this with some definiteness. The general proposition may be stated that any tissue intrinsically capable of living may so serve. Any tissue which will die if deprived of its superjacent nutrient covering, will not readily, if at all, take grafts. Thus bone deprived of periosteum, cartilage of its perichondrium and tendons or nerves of their sheaths will not be successfully grafted; they can only be permanently covered by a pedunculated flap, that is one containing vessels with circulating blood. If we will graft bone, the compact tissue must be chiseled off down to the vascular spongiosa. Grafts will adhere to fascia, muscle, tendon sheaths, periosteum, nerve sheaths, and even on adipose tissue.

Perhaps I can not show the valuable service rendered to surgery by this method of Thiersch's in a better way than by giving a few aggravated cases healed in this way, as they could not have been by any other known surgical procedure:

1. A case of Paget's Disease. A woman in middle life had suffered nearly ten years of this skin disease in the region of the right breast. This had gradually extended to a diame-

ter of eight inches. This had resisted all treatment by the most distinguished specialists. On April 21, 1890, the whole of the diseased area, with the underlying portion of the mammary gland, was removed. The whole surface was immediately covered with skin from the thigh. Healed in ten days. A year later, a slight recurrence; excision and transplanting. Healing.

2. A large plastic operation combined with transplantation. A carcinoma of corner of mouth, a portion of both lips and a large portion of cheek was removed. A flap with pedicle was taken from front of neck and reaching to manubrium sterni was turned up and attached with skin surface in. The whole raw surface, including the external raw surface of the flap, was transplanted with skin from thigh. The result was excellent, healing being rapid and cicatricial contraction not showing itself.

3. Ulcerating carcinoma of face and head. The operation required removal of a large portion of the left cheek, the left wall of the nose, including the cartilage and a part of the front wall of the antrum. A plastic operation covered the gap and skin from thigh was used to cover the defect. Healing took place, but pneumonia supervened, followed by erysipelas of the nose and face. Pleurisy with effusion also occurred, cured by puncture and drainage. He was discharged cured on the seventy-fifth day. Just two years afterward extensive recurrence in left half of face. The limits were very closely those of the original disease. The eye was also involved. At the earnest insistence of the patient a second operation was undertaken. The whole growth with left eyeball was removed. The operation was extensive, going into the mouth and nose and requiring tracheotomy. Collapse prevented the making of the plastic operation. The wound was tamponed. This was on June 4. On July 24 the plastic operation was made and the grafting made as before. Healing was complete.

In the treatment of ulcers of the leg, the method of Thiersch has given brilliant results, both as regards the abridgment of duration of healing and as to permanency of cure. Urban refers to numbers of cases, but I prefer here to give the method in detail as carried out by myself, with almost unvary-

ing success, in the treatment of ulcers in my wards in the Charity Hospital. My experience now amounts to twenty-four cases.

I have pursued the following plan: The ulcer and limb are first scrupulously cleaned with green soap and water by scrubbing with a nail brush—under anæsthesia, if necessary. (By dressing with soft soap for a day or so this cleaning process will be materially facilitated, by loosening the thick collection of epidermis.) The part is then washed well with ether or alcohol and before this has evaporated with acid-sublimate solution (1 to 1500); a wet sublimate dressing is then applied. This is renewed daily for three or four days, or until the ulcer has been rendered aseptic, as shown by the stopping or diminution of suppuration, and the firm granulations.

On the day appointed for the operation, I sometimes have a drip of sublimate water kept on for several hours, so as to further insure asepsis. The dressing is now removed, the ulcer is again thoroughly cleansed by rubbing the sublimate solution with the hand well into granulations. The final washing is done with the 0.6 per cent. boiled salt solution, to get rid of the antiseptic.

Two bowls containing the aseptic salt solution are conveniently at hand. Two razors are to be used, one to take off the granulations, the other to procure the skin. The ulcer is shaved exactly in the same way as the strips of skin are taken off. The razor is started in above the margin of the ulcer and a strip about an inch wide, including one side of the ulcer, is taken away. Then another, and another, and so on until the ulcer is completely substituted by a smooth raw surface, perceptibly larger than the original ulcer. Compresses, wet in the aseptic salt solution, are put on by an assistant, who maintains pressure to stop the extensive oozing. A second assistant has in the meantime gotten the furnishing surface ready by thorough scrubbing with soap and water, ether, sublimate, and finally aseptic salt solution. Strips are then removed with the razor, the surface being moistened with the salt solution to facilitate the movements of the razor.

Each strip is taken directly to the surface to be covered and applied, the first assistant lifting enough of his compress

to enable the operator to spread out the graft. One longitudinal half is thus covered and a compress then applied over the grafts and the rest of the ulcer gradually covered in this way. It is of advantage in some cases, as I have found, to resort to the exsanguinating method of Fischer, already mentioned. But a little blood does not matter much, and as soon as the grafts are once on, it is an easy matter by compression to control the bleeding, since the little vessel mouths are well closed by the superimposed skin. There is usually pretty free bleeding from the graft furnishing surface, but it is wrong to attempt to get thick grafts. The thinner they are the better. In covering the ulcer, this must be done completely; not a vestige of the raw surface should be visible. To do this I apply the pieces of skin close together, spreading them out to the best advantage. Then other pieces are to be placed over the uncovered spaces between grafts and all around the edges, or they may be laid imbricated. The dressing I have already described. To complete the description of methods of grafting, it is necessary to mention that of Wolfe of "Skin Transportation."

It is "a method of performing plastic surgery in which a piece of the whole thickness of the skin is entirely removed from one part and transferred to another distant part to fill up a gap." It was suggested by Dr. J. R. Wolfe, in Glasgow, in 1876. This method does not aim, like that of Reverdin, to plant a piece of skin in favorable soil where it will take root, as it were, and grow, but the piece is intended simply to adhere to and grow upon the surface where it is applied. It was first (Wood's Handbook, article "Skin Transportation,") applied for the relief of ectropion of both eyelids of one eye. There is, however, "no limit to its applicability in other situations than that all the conditions of success be attainable." These are, as stated by Carmalt in the handbook: "1. Perfect asepsis of both wound and flap. 2. Perfect coaptation at all parts underneath and around the edges. 3. Undisturbed rest afterward until union has taken place." For success here absolute asepsis is necessary, and the principles of Listerism alone made the magnificent method possible. In this plan a piece of skin is dissected out, of the exact shape and large

enough to cover in the gap to be filled, or rather one-third larger in every direction, to allow for the shrinkage. The piece is then laid on the palm of hand and all shreds of cellular tissue thoroughly removed with a pair of sharp scissors. The receiving surface having then been prepared, the skin is now fitted in and sewed, preferably with continuous catgut suture, to the skin bordering the wound.

To facilitate this Carmalt has devised a punch, like the eyelet hole maker of shoemakers, for punching the small suture holes before the complete removal of the flap. The suturing otherwise is annoying and tedious. Without the punch, it would be better to use interrupted sutures, one suture to each needle, and insert these before the flap is completely dissected off. Otherwise the insertion of the needle after the flap had been put into place would inevitably cause embarrassment, and by delay seriously compromise the result. Esmarch says that it is of great importance to remove from the flap all fat and cellular tissue, "till the surface appears quite smooth and as white as white glove skin."

Esmarch says: "An exact sewing of the edges is unnecessary and not to be recommended; a few catgut sutures are sufficient."

"It would seem," says Carmalt, "that this method of transportation of large pieces of skin is capable of wider application than it has heretofore received at the hands of surgeons, the modern methods of treatment being better adapted to obtaining union by the first intention." Carmalt has successfully transported a single piece of skin, $4\frac{1}{2}$ inches long by $2\frac{3}{4}$ inches wide, only a small portion of one end not uniting.

Esmarch recently (*Annals of Surgery*) referring to an inaugural dissertation of Hahn, of Kiel, in which thirteen cases of this operation were reported, thus states the advantages of the method: "1. It enables us at once and completely to cover fresh wounds. 2. Skin with cicatricial tissue can be replaced by true skin, which offers greater resistance to external deleterious influences. 3. It gives better cosmetic results than any other method of transplantation, and this is especially important in operations on the face."

THE DISLOCATED LENS.

EXTRACTION WITH AND WITHOUT THE "AGNEW BIDENT" IN THE
MANHATTAN EYE AND EAR HOSPITAL, NEW YORK CITY.

By DR. W. J. KILLEN,

Ex-House Surgeon of Manhattan Eye and Ear Hospital, New York; Member Jefferson
County and State Medical Societies, Alabama.

Formerly a dislocated crystalline lens was so serious a matter, and the results of attempted extraction so bad, that the offending eye was often enucleated, to prevent sympathetic irritation. During my term of service as *interne* of the above hospital I observed a number of these cases; and quite appreciated the ingenuity of the instrument presented by Dr. Agnew in 1885, and later improved by Dr. Andrews, of New York, by the addition of a removable handle. As pointed out by Dr. Agnew, the chief use of his instrument is in those cases where the lens is floating in the vitreous, or likely to become detached and fall into the vitreous; the bident pinning the lens in the pupillary space preventing serious loss of vitreous fluid, and making extraction easier.

At the time of presenting his instrument to the American Ophthalmic Society in 1885, Dr. Agnew reported an operation for luxated lens on a blind eye—result, eye quiet and normal to external appearance.

Dr. Webster reported extraction, April, 1885—result,
 $V = \frac{20}{100} W. + \frac{1}{4\frac{1}{2}}.$

In *New England Medical Monthly* Dr. Pomeroy gives four cases: results successively of $V = \frac{20}{200}, \frac{20}{70}, \frac{20}{70},$ and $\frac{4}{200}.$

At same time Dr. Pomeroy reported a case of Dr. Agnew's—result, eye quiet, but vision not noted; and one of Dr. Webster's—result, $V =$ fingers, eye quiet.

The cases I have to report are as follows, viz.:

1. Dr. Agnew, 1887. P. P.—, R. V. = $\frac{30}{200}$ L. V. = P. L., field good. Left lens detached from upper outer side by blow from rock. *Operation:* The usual bident under ether (described later), section downward, lens withdrawn with wire spoon, slight amount of vitreous lost; (3 days later) small amount of vitreous protruding, snipped of with scissors; (39 days later) eye quiet, $V =$ fingers. Patient discharged.

2. Dr. Carey, October 29, 1888. M. C., æt. 27. R. V. = fingers at two feet; L. V. = $\frac{20}{80}$.

Duration, six weeks. Cause, a blow from a piece of wood.

Operation: Ether. Eye cleaned with sat. sol. boric acid; speculum; fixation below; bident entered about two lines back of sclero-corneal junction, pointing backward, so as to get behind the lens, which is found and brought into the anterior chamber, and counter-puncture there made; handle of bident removed; section with Graefe knife above; lens removed with wire spoon; bident taken out, vitreous being kept back by finger of left hand; eye again washed; speculum removed; double bandage.

In this case, later, both iris and a little vitreous protruded and was snipped off. Thirty-five days after operation patient was discharged. The eye quiet and V=P. L. Month and a half later acute glaucoma developed, tension + 3, the patient having used a strong solution of atropine at home, by mistake. Iridectomy was immediately done, and patient discharged after nine days, with normal tension, eye quiet.

3. Dr. Carey, February 18, 1889. S. M., æt. 65. R. V. = $\frac{20}{200}$ incip. cat.; L. V. = P. L.

Duration, four years. Cause, blow from a ball. Lens would bob up and down with movements of the eye, making patient uncertain and dizzy.

Operation: As before, except lens was punctured by one of the prongs of the bident, which failed to bring it in the anterior chamber. Bident *was withdrawn*, section made above, and extraction attempted with wire spoon without success, as lens could not be found. As much traumatism had been done, nothing further was attempted. Eye bandaged.

As the eye, naturally now, went from bad to worse, in spite of best treatment, it was finally enucleated. The lens and various hæmorrhages were found in the vitreous.

4. Dr. Pomeroy, October 29, 1890. M. A. S., æt. 54. R. V. = $\frac{1}{200}$; L. V. = P. L. Only a reflex obtainable from left eye. Duration four weeks. No cause (?).

Operation: Ether, the usual bident, no vitreous escaping till bident withdrawn; eserine = 2 gr. to 3i. Eight days later,

as there was a little lens matter in pupil, atropine 4 gr. to 3i was used.

Seventeen days after operation patient discharged, eye quiet, with vision $\frac{1}{200}$.

The extractions without bident were as follows :

1. Dr. Carey, March 30, 1890. W. D., æt. 52. Lens in anterior chamber. Cause, two blows on right eye at different times. Duration fifteen years. Eye too irritable for satisfactory vision.

Operation: Cocaine, section above with Græfe ; cystotome cut lens in two parts, which were delivered by spoon and forceps; double bandage. Very little reaction followed, but twelve days later tension was — 2, with same plastic material in anterior chamber and pupil. Three and a half weeks after operation, patient discharged. Eye quiet and vision equals P. L.

2. Dr. Webster, April 30, 1890. Cornelius Rielly, æt. 60. R. V. = $\frac{20}{200}$; L. V. = $\frac{20}{20}$. Duration, seven days. Cause, blow from rock. Tension of + 2, and pain, urged the operation.

Operation: Ether, usual cataract section; upon pressure with spoons vitreous escaped, so wire spoon introduced and lens extracted; eserine and bandage. Five days later some presenting vitreous excised. Two and a half weeks after operation eye quiet and $V = \frac{20}{100}$ W. + $\frac{1}{3}$ $\frac{1}{2}$.

3. Dr. Webster, October 17, 1890. E. O., æt. 50. R. V. = P. L., field good; L. V. $\frac{20}{200}$, incip. cat. No history of traumatism. Duration, ten years. Lens dislocated down and back.

Operation: Cocaine, Graefe section, slight vitreous escaping, lens removed with wire spoon; eserine bandage. There was but little reaction and no interruption toward cure except a slight bulging of wound, which was cauterized. Three weeks after operation eye was quiet, with vision of $\frac{3}{200}$ W. + $\frac{1}{4}$. * * * * *

The greatest use of the bident is in those cases where the lens is floating in the vitreous or likely to easily fall back; and, especially, also, to block the profuse escape of a fluid vitreous.

I am aware that one of our most eminent New York oculists says the bident is unnecessary in bringing a floating lens into the anterior chamber, "as" he says, "manipulation can accomplish the same result." Would say that I believe it would take a very skilful manipulator, as it seems to me the lens would have about as much tendency to go backward as forward, there being nothing to sustain it. The *prone position* will sometimes cause the lens to *fall* into the anterior chamber.

These cases also show that the bident makes an unnecessarily severe operation, *should the lens be so fixed that a wire spoon can be gotten underneath easily.* The wire loop is slight and causes little or no traumatism, and is easy of application. Once placed behind the lens extraction is sure.

With one exception, all of these cases reported were successful—as far as saving an apparently normal eye, free from troublesome inflammation, etc. The sight, in a majority of the cases, was fair, considering the previous condition.

In my short term of private practice have operated on only one case of dislocated lens, as follows: John Cox, æt. 42.

In December, 1891, while blasting coal, was struck in right eye. Saw patient next day, and found blood in anterior chamber and pupil, with a vision of p. l. L. V. = $\frac{20}{20}$. By appropriate treatment the blood cleared gradually. Finally the lens was found to be dislocated from upper inner side, and swaying back into vitreous chamber.

Operation: Ether, usual bident operation; section above; lens removed with sharp hook and wire spoon; small amount of vitreous lost when bident was withdrawn; eserine 1 gr. to $\frac{3}{4}$; bandage. At no time was there much reaction or inflammation following the operation. Atropine used on eighth day. Patient discharged, eye quiet, with a vision of $\frac{20}{100}$ W. + $\frac{1}{4}$ $\frac{1}{2}$ on the twenty-fourth day after the operation.

In closing, would thank Drs. Webster, Carey, and Pomeroy for allowing me free access to their hospital case books.

Would also say that nothing is omitted at the Manhattan Eye and Ear, in the way of antisepsis, hygiene, or good and efficient nursing, that tends to make any of these operations a success.

THE TREATMENT OF HYPERTROPHIC RHINITIS BY ELECTRO-
LYSIS.

By W. SCHEPPEGRELL, A. M., M. D., NEW ORLEANS.

The importance of the nasal chambers in respiration is becoming more and more recognized by the medical profession. The first avenues through which the air passes on inspiration are provided by nature with complete arrangements for warming, moistening and purifying the air before entering the pharynx, larynx, trachea and lungs. When, however, the nasal chambers are affected with disease they can no longer perform the function, and the patient is exposed to irritation and disease of all the respiratory organs, and, also, of the eustachian tube and middle ear.

Among the most frequent diseases affecting the nasal chambers is hypertrophic rhinitis. The cause of this affection has been ascribed by various authorities to variations of temperature, changes in barometric pressure and dust and other irritants in the atmosphere, and, no doubt, each of these has its place in the etiology of the disease. They give rise to repeated attacks of catarrh, each attack leaving the tissues more hyperthrophied, until finally the passages of the nose are so occluded that the air can no longer pass freely to and from the lungs.

At this stage the stenosis of the nasal passages causes the air to pass through so rapidly that it no longer attains its proper degree of warmth, moisture and purity, and the mucous membrane of the pharynx, against which it impinges, soon shows the effects of the air, which, unprepared by its passage through the nasal chambers, abstracts moisture from its surface and deposits foreign impurities in its walls. The loss of moisture destroys the normal consistence of the mucus secreted to moisten and protect its walls, and to assist in deglutition. The mucus thus becomes thick and inspissated, and instead of passing down unnoticed and being swallowed with the saliva, it annoys the patient by adhering to the pharyngeal walls. The foreign impurities also irritate the mucous membrane of the pharynx, and eventually the trouble extends downward into the larynx and not unfrequently to the bronchial tubes.

The stenosis of the nasal passages causes an increased effort of the muscles used in respiration, and this effort tends to form a vacuum behind the point of abstraction on inspiration, and an undue pressure on expiration. This disturbance of the pressure of the air in the naso-pharynx has an injurious effect upon the delicate mechanism of the drum and middle ear, and pain or noise in the ear, or defective hearing, is frequently added to the list of symptoms.

As the imperfect junction of the nasal chambers causes the most marked symptoms beyond them, the patient comes most frequently with a history of throat or ear trouble. To the specialist this is at once suggestive of the cause of the trouble, and it is incumbent upon the general practitioner to carefully examine the nasal cavities, both by anterior and posterior rhinoscopy, in all cases of ear and throat affections.

The indications for treatment in hypertrophic rhinitis lies in the relief of the stenosis. The inferior turbinated bodies, one or both, are usually the cause of the stenosis, either in their anterior, middle or posterior part, or in the greater portion or the whole of their extent.

The highest authorities favor the reduction of the hypertrophies by the cautery, some, and among them Bosworth,* favoring the chemical cautery, and others, among them Lennox Browne,† preferring the electro-cautery.

The chemical cauteries I have tried faithfully, but have finally given up. With the utmost care, the patient always complains of more pain than when the electro-cautery is used. It is difficult to confine the action of the chemical cauteries to the place intended, as the acid is washed by the secretions of the nose to parts for which it is not intended, and, perhaps, to a part not cocainized, resulting in unnecessary pain and irritation. Of the chemical cauteries, chromic acid is perhaps the best, but even this has many of the disadvantages described above.

In the electro-cautery we have an effective and convenient means of treating the hypertrophies. After the parts have been anæsthetized by a 20 per cent. solution of cocaine, the cautery should be carefully applied to the place intended, and

* Bosworth on Diseases of the Nose and Throat.

† Browne on Diseases of the Nose and Throat.

the hypertrophied parts of the turbinated body cauterized. The best method is to await the contraction of the tissues, which follows in about ten minutes after the application of the cocaine, when the solution of cocaine should again be applied, as the anæsthetic effect of the first application will already have worn off, and three minutes later the cauterization may be effected. A number of deep *punctures* should be made with the cautery so that the tissues will be bound down by the cicatrizations following the discharge of the slough.

When the heated cautery is pressed into the tissues it should be allowed to remain hot until it is again freed from the tissues. If it is allowed to cool while in the tissues and then removed, it would bring out with it the adhering slough, causing more or less hæmorrhage, and leaving the cauterized part unprotected by the slough. When the slough is discharged spontaneously, granulation has already set in.

The electro-cautery is more efficacious and convenient than the chemical cauteries, but, as in the case of the chemical cautery, we have severe reaction, a slough, some fever, a discharge of muco-pus, occasionally mixed with blood, for some weeks. The cause of this is that we have made an open wound, which is exposed to all the impurities of the atmosphere, and which it is impossible to keep aseptic. An operation which would give the advantage of the electro-cautery in convenience of application and in effectiveness, and yet be devoid of the resulting reaction and irritation, would appear to be the ideal operation. This could only be obtained by a *sub-mucous* operation, so that the parts would not be exposed to irritating discharges and to the pyogenic germs of the atmosphere.

In electrolysis we have a means of destroying tissue with the least disturbance of the superficial parts. In seeking a method of destroying the hypertrophies in the nasal chambers, that should be free from the reaction following the use of the electro-cautery, I determined to try the use of electrolysis, which is so effective in hypertrophies in other parts of the body. After a considerable number of trials, I finally reached my conclusions in regard to the duration and strength of the current of electricity required, and obtained results which were most gratifying. After one application, most cases show a complete removal of

the stenosis in eight or ten days, and in the meanwhile there is no reaction, no irritation and no discharge, as the operation is entirely sub-mucous.

The patient is first prepared for the operation by being ordered to wash the nasal passages with a mild antiseptic solution of bicarbonate of soda and boracic acid, or a solution of "Seiler's Tablets." A 20 per cent. solution of cocaine is then applied to the hypertrophied turbinated body, and when the contraction of the tissues following this application has taken place, the solution is again applied, and the small pledget of cotton soaked with the solution of cocaine is left in contact with the inferior turbinated body. As the application of the electricity requires from seven to twenty minutes, I learned after a few trials that the effects of the anæsthetic frequently passed off before the conclusion of the operation. After adopting the method of leaving the cotton pledgit *in situ*, pain was no longer complained of.

For electrolysis there is needed a battery of about fifty volts. When the *Edison current is used the circuit should be protected by means of a shunt and volt selector. A good rheostat will also be needed. Fig. 1 shows the new Bailey

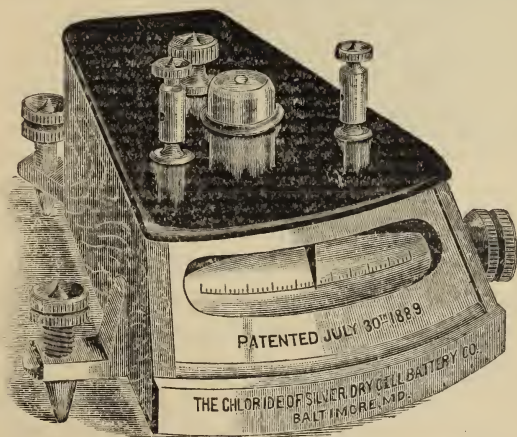
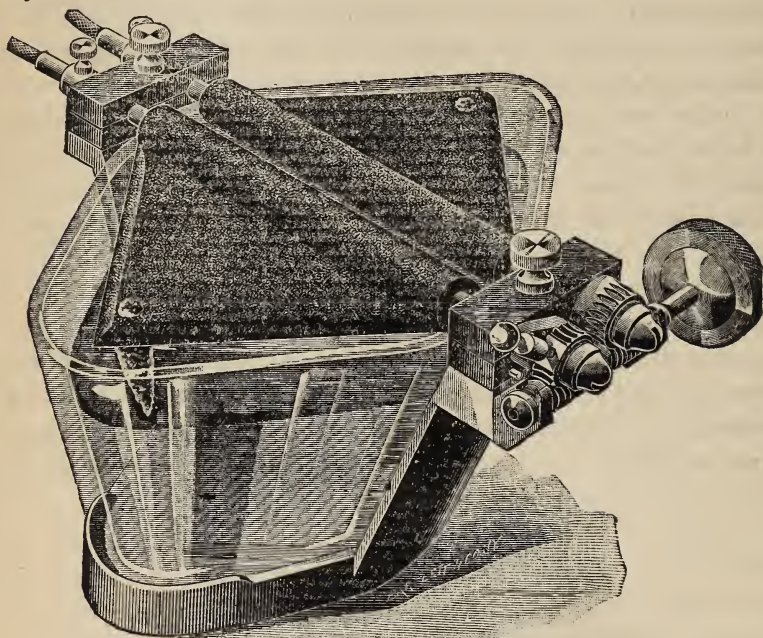


Fig. 1. The New Bailey Rheostat.

Rheostat, made by the Law Telephone Co., which gives excellent results. A milliampèremeter will be required for measuring the current. A reliable instrument is that of the Chloride of Silver Dry Cell Battery Co., shown in Fig. 2.

*The Edison Current in Medicine and Surgery, by W. Scheppegrell, A. M., M. D.

For applying the current there will be needed a dispersing and an active electrode. The dispersing electrode consists of a thin, pliable plate of copper, four by five inches, backed with mackintosh and covered for use with moist absorbent cotton. The dispersing electrode is placed in the back of the neck, although the chest, abdomen, or other part of the body may be used.



The Barrett Milliampere Meter.

The active electrode consists of a platinum needle, one and one-half inches in length, fitted into a piece of copper wire two and one-half inches in length, insulated by means of a thin loose-fitting piece of rubber tubing. The insulated wire serves as a handle, and has attached a light cap for making connection with the binding cover. Fig. 3.



Fig. 3. Dr. Scheppegrell's Needle and Holder for Electrolysis.

After the parts have been cocainized, the needle is gently passed into the most hypertrophied part of the inferior turbi-

nated body, and as far back as needed. The rubber tubing is then pushed over the part of the needle remaining outside of the tissues to prevent the escape of the electricity into the adjoining mucous membrane. The passing of the needle into the tissues should not be done blindly, and care should be taken that the point of the needle does not pass outside of the turbinated body, on the one hand, nor too far in toward the bone, on the other. To do this properly the nostril should be well dilated, preferably by means of a Duplay's speculum, and under a good illumination from the head mirror.

After the needle is in position, the patient is directed to hold the instrument, steadying the hand by pressing it against the face. In children and nervous persons, the electrode should be held by an assistant, or by the surgeon himself. The dispersing electrode being applied, and the cords secured to the binding-posts, the current should be gently turned on by means of the rheostat. When cocaine has been properly applied, pain in the operation is almost entirely absent. Some patients complain of a stinging sensation of the electricity at the dispersing electrode, but, if this is sufficiently large and held so as to form a uniform contact with the skin, this irritation is very slight.

In regard to the direction of the current, the writer has used both the positive and negative in the nose, and each with good results. The negative pole is, however, more convenient in some respects, and the operator is enabled to remove the needle more easily after the operation.

The best results were obtained when a current of ten milliampères was applied for ten minutes. When this strength of current is not tolerated, as is frequently the case, the diminution in strength should be made up by the increased duration of the current, although satisfactory results have not been obtained with a current of less than five milliampères. When only seven milliampères are given the current should be applied for fifteen minutes, and twenty minutes for a current of five milliampères. The strength and duration of the current will depend also upon the size of the hypertrophies.

When the condition presented is more of an hyperæmia, or simply a relaxation of the tissues, a current of five milliampères will be found sufficient.

Unless the hypertrophies are very large, one application to each inferior turbinated body is usually all that is necessary. When the application has been made a sufficient length of time, the current should be turned off by means of the rheostat, and the needle removed. The point of entrance of the needle is then touched with collodion to exclude the air.

The only disadvantage of the electrolytic method of treating hypertrophic rhinitis is that the operation requires a longer time than the electro-cautery. In restive and nervous patients, rapidity of operation is of considerable importance, and in several cases, although the patient complained of no pain, I have been compelled to resort to the electro-cautery on account of the inability of the patient to remain quiet.

I have used electrolysis in hypertrophic rhinitis, thus far, forty-four times, with a large majority of good results and with absence of the reaction, irritation and discharge following the use of the electrolysis, and the chemical cauteries.

For general information, I append here a list of ten consecutive cases, in which this method was used.

CASE I.—Gertrude G., æt. 18. Hypertrophic rhinitis and post-nasal adenoids. Adenoids removed with Gottstein's curette. An electric current of six milliampères was applied to left inferior turbinated body for seventeen minutes, and eight milliampères to right side for thirteen minutes. Nasal stenosis entirely removed without noticeable reaction or discharge.

CASE II.—Mrs. O. J., æt. 40. Hypertrophic rhinitis. Complains of pain and "fulness" in left ear. Six and one-half milliampères for fifteen minutes to left and seven milliampères for fourteen minutes to right inferior turbinated body. Discharged cured.

CASE III.—Adolph W., æt. 20. Hypertrophic rhinitis. Five milliampères for twenty minutes to left and seven milliampères for fourteen minutes to right inferior turbinated body. Discharged cured.

CASE IV.—Niclaus F., æt. 44. Hypertrophic rhinitis, and otitis media suppurativa. Six milliampères for sixteen minutes to right and ten milliampères for ten minutes to left infe-

rior turbinated body, resulting in a removal of the nasal stenosis.

CASE V.—Mary T., æt. 27. Hypertrophic rhinitis. Complaints of “hawking” and a dry throat. Eleven milliampères for nine minutes to right and eight milliampères for fourteen minutes to left inferior turbinated body. Discharged cured.

CASE VI.—August McP., æt. 23. Hypertrophic rhinitis, hypertrophied pharyngeal tonsil and acute congestion of right middle ear. Pharyngeal tonsil treated with curette, and fifteen milliampères for seven minutes to right and ten milliampères for ten minutes to left inferior turbinated body. Discharged cured, the congestion of the middle ear having subsided without any special treatment directed to this organ.

CASE VII.—Alfred M., æt. 21 years. Hypertrophic rhinitis and hypertrophy of the faucial tonsils. Tonsils removed with tonsillotome, and eight milliampères for twelve minutes applied to right, and twelve milliampères for eight minutes to left inferior turbinated body. Owing to the unusual size of the hypertrophy of the left inferior turbinated body, the nasal stenosis was not sufficiently removed by the first application on this side, and a second application of ten milliampères for ten minutes was applied, resulting in a complete removal of the obstruction.

CASE VIII.—James R., æt. 12. Hypertrophic rhinitis, septal spur on left side, and post-nasal adenoids. Adenoids removed with curette, and five milliampères for twenty minutes applied to right and six milliampères for seventeen minutes to left inferior turbinated body. The septal spur was then removed with nasal saw. Discharged cured.

CASE IX.—Mary T., æt. 32. Hypertrophic rhinitis, post-nasal catarrh and septal ridge on both sides. The patient appeared so restive under the application of the electric current, that, although she stated that she felt no pain but was only “nervous,” it was thought best to discontinue the application and use the more rapid method of the electro-cautery. The operation was followed by the usual reaction and discharge, but the ultimate result was satisfactory.

CASE X.—Alice W., æt. 26. Hypertrophic rhinitis, hypertrophied lingual tonsil, and otitis media chronica non-sup.

Lingual tonsil was cauterized with the electro-cautery, and thirteen miliampères for eighteen minutes applied to right and seven milliampères for fourteen minutes to left inferior turbinated body. Result good; still under treatment for the otitis.

ENORMOUS HYPERTROPHY OF THE LINGUAL TONSIL, WITH CHRONIC INTERSTITIAL EPIGLOTTITIS.*

By AUGUSTUS McSHANE, M.D., Assistant Surgeon Eye, Ear, Nose and Throat Hospital.

The case which I am about to describe was interesting in several important points, chiefly in regard to diagnosis, since it was at first difficult to distinguish it from primary tubercular laryngitis.

The patient is a full-blooded negress, aged 30 years, house servant, a native and lifelong resident of Louisiana. She spent most of her life in the piney woods, and for a number of years had been living about sixty miles north of New Orleans, in a very heathful locality. While she was not of a very robust constitution, she had always enjoyed good health in the country until the spring of 1891. In April, 1891, she had an attack of acute tonsillitis, which ended in suppuration.

The present disease began as a tickling or irritation in the throat, which became progressively worse. She did not remember exactly how long she had been sick. She applied to a local practitioner for relief, and he made about five applications of solid nitrate of silver to the throat. This gave no relief. The irritation in the throat became more marked, and she began to have a slight difficulty in swallowing, and also, later on, her sleep became very much disturbed, owing to a sense of suffocation. She went from bad to worse, and in time she found that swallowing was becoming very difficult. The dysphagia became so marked that she could swallow only liquids, and that with discomfort. On this account her strength gradually failed, and she became alarmed at her weakened condition. She was more distressed, however, by the frequent attacks of dyspnœa that occurred during sleep; and it

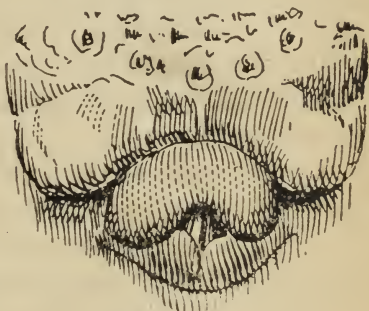
*Read by title before the Louisiana State Medical Society, April 27, 1892.

was for the relief of the dyspnœa that she applied at the Eye, Ear, Nose and Throat Hospital.

She presented herself at the clinic on July 1, 1891. Her previous history has already been outlined. She was somewhat emaciated. Her voice was peculiar and strained, as though she were being choked. An examination with the laryngoscope revealed the state of affairs represented in the accompanying figures. Upon first seeing her larynx, and



At rest



Phonation

remembering the character of her voice, I thought that I had to deal with a case of œdema of the larynx; but upon touching the swollen tissues with a probe it became evident that there was no œdema, but instead a chronic thickening, a hyperplasia. The lingual tonsil, which in health is not prominent, was enlarged to an enormous extent. It formed a thick, rough mass, extended across the base of the tongue, and pushing the epiglottis backward. I have never seen another lingual tonsil so much hypertrophied. Instead of consisting of rather soft tissue it consisted of a dense, tough, unyielding substance.

Such a lingual tonsil would be enough to cause a great deal of trouble by itself, but in the present case there were other lesions which gave rise to more alarming symptoms. The epiglottis was so swollen and thickened that it scarcely preserved any resemblance to its normal self. It looked like a pale piece of flesh, about three-quarters of an inch thick, rounded anteriorly, and with a slight indentation on its posterior surface. It was a typical "turban-epiglottis." The arytenoid eminences were greatly swollen and were not very far from the thickened epiglottis. The latter leaned back-

ward so far that the vocal cords could not be seen during respiration; during phonation, the posterior part of the cords could be seen. (See figure.) The cords, so far as they could be seen, were not changed in color or form. The alteration in the voice was due to the swellings above the cords.

The presence of these swollen masses afforded an explanation of the dysphagia, and also of the attacks of dyspnoea, which came on chiefly while she was lying on her back. The epiglottis, being thicker and heavier than in health, gravitated toward the vestibule of the larynx, and being drawn downward by the inward current of air, came in contact with the arytenoid swellings, and thus prevented the entrance of air into the larynx.

The rounded swellings over the arytenoids, though not presenting the pyriform appearance, made me think that the case was one of tubercular laryngitis. The mucous membrane seemed to me paler than usual, but there were no ulcerations anywhere, and the patient's expectoration was exceedingly scanty. Another feature that caused me strongly to incline to the diagnosis of tubercular laryngitis was a well marked pallor of the soft palate.

In order to throw some light on the diagnosis, a physical examination of the chest was made; but the lungs were found to be normal. Her sputum was examined twice microscopically, and each time it was found to be free from tubercle-bacilli; it evidently came from the larynx and trachea, and not from the lungs.

The diagnosis of tubercular laryngitis was thus rendered very doubtful; still it is possible for a primary laryngeal affection to exist without lung complications. The swelling seemed to be due to a fibroid thickening of the submucous tissue. The case was not definitely regarded as one of tubercular laryngitis, and the subsequent history showed it to be non-tubercular.

The question was: What should be done to relieve her? Locally, I made an application under cocaine of trichloroacetic acid to the lingual tonsil, as I had often done in similar cases. This was done more as a placebo than anything else, for I had ordered an instrument devised by Dr. E. P. Roe,

and called by him the *lingual amygdalotome*. (See *Transactions of the American Laryngological Association*, 1891.) This did not come for three weeks.

Her general condition was also attended to. In order to give her some rest a soothing cough syrup (the *Anodyne Pine Compound* of Parke, Davis & Co.) was given; this afforded her considerable relief. As a tonic, I ordered her maltine with cod-liver oil, which she took continuously for a long time until she greatly improved. Her diet consisted mainly of milk, beef-broth and bread; she got along very well with these.

In order to reduce the swelling of the epiglottis four punctures were made along its upper border with the galvano-cautery. The hot platinum point was pushed into the epiglottis for more than a quarter of an inch. When the punctures had nearly healed, several similar punctures were made in the arytenoid swellings. The cauterizations were repeated by the time Roe's amygdalotome arrived. Altogether four cauterizations were made.

This instrument is like a Mackenzie's improved tonsillotome, with a curved shank. It can only be used when the tissue to be removed is very prominent. This was the case with our patient. The part was thoroughly cocaineized with a 20 per cent. solution, and the cutting part of the instrument was placed in position with the aid of the laryngeal mirror. The mirror was then withdrawn, and the blade of the instrument pushed down.

The first attempt was not successful, but the second was made with a little more pressure upon the hypertrophied mass, and a large piece was removed. The piece was about three-fourths of an inch long, one-quarter inch wide, and one-eighth inch thick. The bleeding was slight. A great deal of force had to be used to cut through the mass; it felt very much like cutting through a fibroid tonsil. This caused me to fear that the bleeding would be very serious, and I prepared to use the galvano-cautery in order to stop any bleeding points that might be found; but not more than two ounces of blood were lost, and there was no secondary hæmorrhage.

When the bleeding had stopped the throat was again examined. There was a big hole where the piece had been cut

out, but it was only on the right side; the left side was scarcely touched, and more of the lingual tonsil was left behind than had been cut away. I was afraid to cut off any more of it just then, for it is not safe to cut extensively into fibroid hyperplasias. The patient was seen the next day and she said that the irritation that she had felt for such a long time was less, although she felt a new pain or soreness consequent upon the operation. Antiseptic applications were made to the exposed surface.

[CONCLUDED IN OUR NEXT.]

Selected Article.

THE MALARIAL HÆMATOZOA OBSERVED IN THE BLOOD OF MALARIOUS PERSONS IN TAMPICO, MEXICO.

By DR. A. MATIENZO.

[Translated from the *Gaceta Medica*, of Mexico, June 1, 1892, by A. McShane, M. D.]

According to Maurel (*Recherches microscopiques sur l'étiologie du paludisme*), the idea of attributing the manifestations of malaria to a living organism is far from being new. Lancisi, at the beginning of the last century, and, before him, Vitruvius, Varro and Columella, in the remotest periods of Roman history, conjectured the existence of a germ.

After Lancisi announced his theory—which the great Razori later on supported and popularized to such an extent that the name *serafici* was created to designate the animalculæ supposed to exist in the atmosphere of marshes—nothing of note was done until the discovery of Salisbury.

In 1866, after long studies, Salisbury announced that he had discovered in the sputum of malarious patients an alga, belonging to the genus *palmela*, which he denominated *Gemiasma*.

The existence of a paludic organism was first admitted, but afterward combatted by Wood and Leidy, and in 1872 the commission appointed by the Congress of Lyons, after numerous investigations, denied absolutely the discovery of the American physician.

After Salisbury, without dwelling on the organisms found by Balestra, Binty and Ekhund, we arrive at the *bacillus malarie* of Klebs and Tommasi-Crudelli, which occupied the attention of the scientific world until the appearance of Laveran's *hæmatozoaire*.

The organism of Klebs and Tommasi-Crùdelli presented itself, according to them, in marshy soil, under the form of mobile spores, but when not introduced into the system they assume other shapes, presenting itself as long filaments which undergo segmentation and form spores.

The numerous experiments performed later on by Celli and Marchiafava appeared to demonstrate the existence of the bacillus, the most important experiments being the successful attempts at cultivation and inoculation.

The *bacillus malarie* had a short life; the repeated experiments of Quinquand, Bacelli, Giovanni, Orsi and Laveran tend to show that its existence can not be regarded as certain, in spite of the assertions of Celli and Marchiafava to the contrary.

The history of the hæmatozoon is well known. Discovered in 1880, while Laveran was studying paludic melanemia, it was not generally admitted to be the cause of malaria until the investigations of recent years removed all doubt, even in the face of the strong protests of Peter.

The discovery of Laveran has been confirmed by Richard, Marchiafava and Celli, Sternberg, Golgi, Councilman, Osler and James, not to cite more than the earliest and most important works. We may regard the existence of the hæmatozoon as a scientific fact, which any one can verify for himself.

The organism discovered by Laveran is observed in *Tam-pico* in the form and varieties which we are about to study, remarking, however, that our descriptions are limited strictly to what we have observed, without regard to those of Laveran.

1. *Leucocytes*.—The changes in the leucocytes are so constant in the blood of these patients that it is the feature which attracts attention. They are noticeable in every stage of the fever, and at times even when it is difficult to find the hæmatozoa properly so called, as at the apogee and during the decline of the fever.

Laveran describes some of these elements as cystic bodies or cadaveric state of the hæmatozoa, and which, according to Maurel, who describes these alterations very accurately, are nothing more than white corpuscles in various stages of decomposition. They present themselves in the preparations of the blood under various forms, sometimes fixed, twice or three times as large as the red corpuscles, and the granules of pigment which they enclose are without movement, leaving clear spaces between them. At other times they form sacs, with granules of pigment in their interior. The whole of the cystic body is endowed with slow movements of progression, which deform it and cause to change its aspect and location.

The granules enclosed in these bodies are comparatively large; they are almost all of the same size, and of a brilliant black color. When the containing body moves the granules also move, but they have no movement of their own. It appears that, being enveloped in a thick, gelatinous substance, they are carried by it in obedience to the law of gravity when the containing body changes its position.

Laveran describes these bodies as the cadavers of hæmatozoa, and Maurel, who seems to have given the subject much study, does not hesitate to say that they are leucocytes in the last stages of metamorphosis.

We can not as yet decide whether they are really cadaveric organisms or leucocytes.

2. *Spherical Bodies*.—These bodies are the most constant; we have found them in nearly all of our cases. They appear in various sizes; some are very small, two or three millimeters in diameter, without pigment, or with one, two or three very small granules; others are as large as the blood-corpuscles and even larger; but the majority are smaller than corpuscles, and all those with pigment are in constant agitation.

The pigment of these bodies is much smaller than that of the cystic bodies or leucocytes above described; they are as red as fire, are not all the same size, and move incessantly. This movement we believe to be proper to these bodies, though Laveran thinks that it is communicated from without, as is the case with the bodies previously described.

It has many times been said that these granules form perfect crowns, and the sketches of Laveran so represent them. It is to be noted, indeed, that the pigment has a tendency, in its constant movements, to group itself around the periphery of the body, certainly forming circles or segments of a circle, but never attaining the mathematical precision with which it is customary to represent them.

In addition to the proper movements of the pigment-granules, well characterized amæboid movements are observed in these bodies, which seem to affect only the hyaline matter of the body. These movements are better observed when the bodies are attached to the red corpuscles, since they appear as whitish masses on a darker background, lengthening and retracting like an elastic body.

Some of these bodies (which are nothing more or less than the *plasmodia* of Marchiafava and Celli) are very small, without pigment, and the corpuscles to which they adhere seem as if perforated (Laveran). Others, somewhat larger, present at first an obscure point in the centre, and, later on, a granule

of pigment, sometimes two or three, which latter are not slow in manifesting their characteristic movements.

The number of plasmodia which may become attached to a blood-corpuscle is variable; usually there is but one, sometimes two, and in one preparation three were found. The corpuscles which support them appear to increase in volume, and nothing could describe their condition more accurately than Laveran's expression: swollen or dropsical corpuscles.

Besides these spherical bodies, we observed in two patients others much larger, having a diameter twice that of a red blood corpuscle; they had a very regular form, like the circle of a compass with its markings. They did not have the aspect that we are accustomed to see in the other pigmented bodies. These bodies, of which from four to six were seen in the field of the microscope, and were completely isolated (due to the retreat of the blood corpuscles when pressure was made on the cover glass), presented themselves full of very small pigment-granules, pale in color, and endowed with energetic movements, like those of solid particles in a boiling liquid. At an unforeseen moment some of these spheres broke, allowing the pigment-granules to escape, which continued in a state of agitation until they were lost in the preparation; there remained as the residue of the body a pigmented fragment, such as we had previously observed without knowing their source. Are these bodies altered leucocytes, or cystic bodies in a certain stage of development?

The vigorous agitation of the pigment, which is never observed in melaniferous or altered leucocytes, makes us believe that they are really parasites of the same nature as the other spherical bodies, although they are differentiated by their monstrous size and the character of their pigment.

3. *Semilunar Bodies.*—These elements, of a strange shape, attract attention when they detach themselves from the bottom of the preparation. They are cylindrical in shape, slightly curved upon themselves, with extremities rounded and generally smaller than the central portion.

Not less characteristic than their form is the disposition of their pigment, which is always found in these elements. As may be seen in the figures in the accompanying plate, the pigment is always thicker than that of the spherical bodies; it has a darker red color, almost black. It is situated in the centre of the body, forming a compact group, with limited expansions due to their movements, which are not very free, but can clearly be made out if the attention is fixed upon them. Laveran in his new work (*Du paludisme et de son hématozoaire*) insists upon the immobility of this pigment; we have already seen that this is not correct.

The form of these bodies is not always semilunar; we have seen perfectly straight elements, others ovoid, and on two occasions almost spherical. The group of pigment-granules always assumed the same arrangement, lying in the centre of the body, and forming the obscure, characteristic discoloration.

These elements are longer than the diameter of the red blood corpuscles, and about two μ wide.

The cylindrical bodies are always found free in the preparation and have no close relations with the red blood corpuscles. As Laveran remarked, pressure upon the cover glass was sufficient to separate those elements which were accidentally attached to the blood corpuscles.

From the form and dimensions of these elements Laveran inferred that they were nothing more than corpuscles invaded by the hæmatozoa. If this were the case, the parasite would consist solely of the pigment found in the centre, thus being a variety of the primary spherical bodies.

Without discussing further the probable origin of these bodies, we believe that their strange aspect and peculiar arrangement of their pigment entitle them to be regarded as of the same nature as the other pigmented bodies.

4. *Flagella*.—We now arrive at the element which Laveran deems the most important: the hæmatzaoön in its perfect state.

In our repeated experiments we have seen these elements only twice. The first case in which we saw them was a patient suffering from intermittent fever. The body presented itself in the preparation as a spherical body, smaller than a red blood corpuscle, from which proceeded the two long flagella, with their oscillatory movements. Some time after we observed another appendix, shorter than the others, situated to the right, and presenting characteristic movements. At times it seemed as if the extremities, formed of small spheres, increased in volume.

In the same blood we saw another body which had two flagella, with oscillatory movements. One of them presented nodosities throughout its entire extent, and two little spheres or granules of pigment at its extremity; one of these was seen to break away, and was succeeded by another granule of pigment. All of this was observed in one of the flagella of the body first described; the other continued to present the rapid movement of its appendices.

According to Laveran, the flagella are developed in the interior of the spherical elements, and when fully developed part from the cyst which envelops them.

Of all the organisms, the flagella are most rarely seen; this is our own experience, and likewise that of Laveran and all others who have been occupied with these investigations.

5. *Corpora Rosacea*.—These bodies, spherical in form, present a pigmented centre, from which segments radiate like the petals of a flower.

According to Golgi, who has made a special study of these elements, this form possesses great importance, since it represents the principal mode of multiplication of the hæmatozoa. The segments are transformed into spherical bodies, and the segmentation is different in the tertian and quartan forms of intermittent fever.

Not having met with these elements in the blood of the patients that we have observed, although there were many cases of tertian fever among them, we shall say no more about them. In the plate which accompanies this paper we have sketched a spherical body that we found in a preparation, which presented great analogy to these elements.

Conclusions: 1. The parasite discovered by Laveran was found in the blood of all the cases of paludism that we examined in Tampico. They were found in the form described by him: Pigmented spherical bodies, cylindrical bodies, flagella (very rare) and cystic bodies.

2. The elements that we found were living organisms, and not anatomical alterations of the blood corpuscles; the energetic movements which they presented independently of the surrounding temperature and their peculiar form leave no room for doubt.

3. The existence of the hæmatozoön in the blood of birds and turtles, apparently in good health, leaves a part of the problem still unsolved. [See NEW ORLEANS MEDICAL AND SURGICAL JOURNAL, July, 1892, page 60.]

EXPLANATION OF THE PLATE.

- A.—Spherical bodies adhering to the red blood corpuscles. The pigment in agitation.
- B.—Plasmodia adhering to the corpuscles. They are seen as spots with amœboid movements. Some of them contain one or two granules of pigment.
- C.—Free spherical bodies with pigment in agitation. Two groups are seen formed of three and four elements.
- D.—Bodies with flagella. One ovoidal body with pigment in agitation and with a single flagellum. The two flagella which are seen separate were not so in the preparation; they are two of the appendices of the body on the left; they are sketched separately in order to show the mode of separation presented by its extremity.



A.



B.

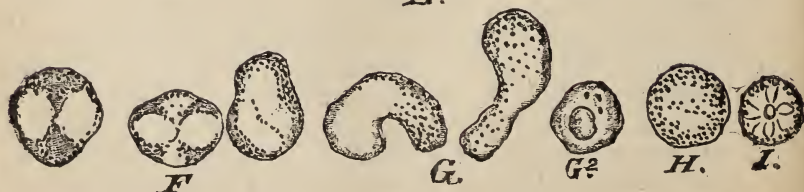
C.



D.



E.



F.

G.

G².

H.

I.

- E.—Cylindrical or semilunar elements; some are free and others adhere to blood corpuscles.
F.—Leucocytes with fixed pigment.
G.—Cystic bodies with amœboid movements; the pigment wobbles about as the body moves along.
H.—Melaniferous leucocyte, with three pigment-granules.
G².—Very large spherical body with pigment in vigorous agitation. One of these bodies breaks and sets free the contained pigment.
I.—Segmented body which offered great analogy to the roseaceous elements of Golgi.
Amplification used: 1200 to 1300 diameters.
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Proceedings of Societies.

ALLEGHANY COUNTY MEDICAL SOCIETY.

Scientific meeting, August 16, 1892, J. M. Batten, M. D., president, pro tem., in the chair.

Dr. J. J. Buchanan reported a case of bone grafting as follows:

I wish to show a case to-night which illustrates the subject of bone grafting in two of its aspects. This boy, 11 years old, came to this country a year ago last December. Previous to that time he had been perfectly healthy. Before he came on ship board he is said to have struck his foot or the lower part of his leg and received a very trifling injury. After arriving on the ship he was taken with a high fever and great pain in the leg from the ankle to the knee. Expectant treatment was adopted, and when he arrived in Pittsburg I was called to see him and found the limb swollen and filled with bloody pus. I made an incision the first evening and liberated an immense discharge of bloody matter, and found the bone affected. I had him removed to Mercy Hospital, where I etherized him and made a long incision down over the inner surface of the tibia and found the bone had been the subject evidently of acute osteomyelitis.

The entire lower three-fourths of the shaft of the bone was destroyed. I extended my incision from a little below the junction of the upper with the second fourth of the bone down to the ankle joint and removed the lower three-fourths of the shaft. The loss of bone was complete. I do not think there was a particle of periosteum left. The shaft of the bone was preserved, and I think it is intended to be an heirloom of the family, but I neglected to have it brought here this evening. The limb was so useless, having lost three-fourths of the tibia and the corresponding part of the ankle-joint, that I proposed amputation to the family, but they rejected it, and I was very glad to be able to try to graft some bone to take the place of this that had been lost. I disinfected the cavity as thoroughly as I could and packed it with iodoform gauze. The constitutional trouble disappeared at once. I put the limb in plaster paris and in a few days removed the packing and found healthy granulations springing up throughout the cavity. I then repacked it, and on the sixth or seventh day secured two puppy dogs, chloroformed them to death and removed the long bones. From the neighborhood of the epiphyses, with rongeur forceps, I took out pieces about the size of a grain of wheat and planted about fifty of them along this gutter, just as a person would sod a ditch, placing the periosteum next the granulations. I then put on the dressing, with impervious tissue next the grafts, and did not disturb it for four or five days. When the dressing was removed it was found that nearly all the grafts had taken.

They could not be pulled off with forceps without considerable force. The granulations soon covered them up and I applied a second lot about a week later, and the boy went on to recovery and has a very useful leg. This was more than a year ago. I should say that before the boy was out of bed he commenced to have abscesses on different parts of the body. The first one I believe was over the lower end of the fibula on the other leg and the next over the lower end of the ulna. He then got abscesses in the soft parts of his legs and arms. These abscesses continued for about a year, but did not confine him to the house. About three weeks ago I was sent for to see him. He had severe pain in the region of the head of the tibia on the same side as the original trouble, and from the considerable amount of fever, the absence of any cause for the symptoms, and also the existence of tenderness over the head of the tibia, I concluded that he had a bone abscess. I had him removed to the hospital, where I cut down on the head of the tibia and chiseled open the bone, and found the entire head of the tibia filled with pus.

I scraped this cavity out as thoroughly as possible. I made a liberal opening in the bone, and the entire inside of the head of the tibia was removed. After disinfecting it I packed it with decalcified bone chips by Senn's method, putting in iodoform powder. The result was that there was no discharge from the head of this tibia whatever. That operation was done about eighteen days ago, and by the old method, of treating these cases, we would have had suppuration for a considerable period, but this boy since that time has never had a particle of trouble and no discharge, except lately a certain amount from the superficial granulations. At the time, just as the abscess was opened, I had a culture made of the pus and I will show it here; it proved to be *staphylococcus pyogenes aureus*. It is a question what caused this abscess in the head of the tibia; whether this was of the same nature as the subcutaneous abscesses that he has had at various times during the last year, or whether these germs had lain dormant in the head of that bone from the time of the first operation.

Now, whether this abscess was due to those organisms which had set up the original trouble, or whether it was mere accident that he should get this new trouble in the head of that tibia near the old trouble, I am unable to determine. I rather think that the germs were there during the whole year. This case represents the two methods of bone grafting, one by the application of living bone direct from an animal, and the other by the use of decalcified bone. I expected to have another case to-night, but, unfortunately, the boy went out of the hospital this morning without my knowledge. In that case, also, the decalcified bone made a perfect result. The boy was only dressed two or three times during his stay in the hospital, and the case was without any trouble whatever. Now, with regard to the choice of these two methods of bone grafting, I should say that, if we have a cavity in the bone, that we ought to take the decalcified bone to fill it. If we have a gap in the bone from which we must take a fresh start, then we should take the bone with its periosteum in small fragments, from an animal, preferably from a young one. Now, the reason these bones were cut up in very small pieces will, of course, suggest itself, that in case any of these failed to unite it could be removed without any trouble.

Fortunately in this case they almost all took hold, although there were seventy-five of them; but I believe if we had put in large pieces, portions of some of them would have failed to unite, and the removal of these portions would probably have destroyed the usefulness of what was left behind. For that reason I would always prefer putting in small pieces.

I expected to show another case illustrating the grafting of living bone, where three and one-half inches of the lower end of the tibia was removed and an inch and a half of the fibula. I grafted this case also with the bones of a young puppy. In it I put fifty to seventy grafts, and that case also I considered a case for amputation; but after the man's refusal to be amputated, I agreed to try and repair his bone and the result was very good. When I last saw him, a short time ago in the hospital, he was able to walk on his limb, but the bone was not entirely firm. For a week or ten days after the injury the head of the astragalus was to be seen in the wound.

Dr. Thomas—Many of these cases of diseased bone we are troubled with heal wonderfully, and even where there is not a great deal of lost bone. I sometimes think we could graft without periosteum. I can not account for it, but we get new bone where we think the periosteum has all been destroyed. About one and one-half years ago a case of complicated fracture of the ankle joint came to the South Side Hospital. The lower section of the tibia had been broken off diagonally about two and one-half inches above the joint. The tibia had been broken off and the lower end of the fibula. A short piece of the lower fragment was imbedded in the fibula, and it was impossible to dislodge it from that position without incising all around it, and taking it out with the forceps. In that case I wanted to amputate the limb, but the patient demurred. No pus appeared in the wound. This bone was regenerated, and the man to-day drives a beer wagon. In that case I thought, and think still, that the bone was regenerated without any periosteum. Now in this case, if the entire tibia was removed, as the doctor says, we have a regeneration of bone, we have the outlines of the tibia, and we have in a manner cured, but we have not got a complete cure in this case as yet. It is a question with me if it were not better if that limb had been amputated than as it is. The probabilities are it will never get well, and the probabilities are amputation will have to be done yet. I do think we sometimes carry our conservative surgery too far. I hope I am mistaken in this case; but my opinion is it would have been better if that limb had been amputated. The patient would have been saved many days of being bed-ridden and many hours of pain, and at present would have been able to walk a great deal better than he does.

Dr. Duff—From what I have seen—I have not practised bone grafting myself—but I have seen and read, and I think there is a very bright future before us in bone grafting, and yet we want to bear in mind, as Dr. Thomas says, that bone has very great recuperative power. I had a young lady come to

my office this morning who is not over twenty-one years of age. I have only seen her occasionally in the past few years. In the fall of 1876 she took scarlet fever. She suffered a relapse, and one abscess after another formed. I removed eighteen pieces of bone from her humerus and from the spinal processes. I can not state the exact number; two or three were removed from the femur. This condition ran on for a long time, when it became evident the tibia would have to be removed, and in the presence of Drs. Sterling, O'Connor and my father, I removed the shaft of the tibia, removing all of the bone, which I still have in my possession at my office; all of the shaft of the bone, and, I thought at the time, all of the periosteum. I advised amputation at that time, but we thought we would await results. Within six months after that there was apparently a complete bony formation in the midst of the tibia. It was very much thicker than the tibia originally, but it was solid. She is a twin, and the two sisters resemble each other very much. She walks by the side of her twin sister to-day, and it is with difficulty you can tell which is the lame one. I have asked this lady two or three times to come before the society, but she is very modest, and I can not prevail upon her. I shall be glad at some future time to show the bone which came from her. This case, with some others not so aggravated, leads me to believe the bone has a greater recuperative power than we generally attribute.

Dr. Buchanan—Of course, if the periosteum of the case I have just shown remained, we need not lay any stress on the grafting of bone; but, as I stated, to the best of my knowledge, nothing of the periosteum was left. Now, of course, this is a matter which I can not prove, even to myself; but to show that bone grafts can grow without the aid of the periosteum, I would refer to a case of Dr. Macewen, of Glasgow. The shaft of the humerus was almost entirely gone, and it had been gone for more than a year. The arm was a perfect flail, but, by repeated graftings of bone, the humerus was replaced; the pieces were set into the gap made between the muscles by dissection; the only guide was the anatomical one of the positions of the muscles. Here several inches of the humerus was gained by bone grafting, and in this case it is not necessary or not possible to give the original periosteum any credit for the result. Now, with regard to the comparison of this leg with an artificial one, I had hardly expected this criticism, I must say. I think this leg is a good deal better than any artificial limb I have ever seen.

Dr. E. G. Matson opened the discussion of the subject announced for the evening, entitled

NEPHRITIS.

(Abstract of the Paper.)

The writer pointed out that each uriniferous tubule was a kidney complete in itself. In this fact may be found the explanation of the insidious character of some forms of disease of the organ when the morbid process fastens at first upon a part of the tubules, leaving the others to continue the urinary function. The lesions are always found to have their primary seat in the cortex; that is to say, in the part of the kidney which performs the vital functions of excretion. It is a fair presumption, therefore, that the origin of nephritis is connected with the excretion itself. This evidently is true in nephritis from lead or phosphorus poisoning. It is possible that in every case the disease arises from the necessity of separating some substance from the blood for which the organ is unsuited, and which is injurious to its structure. This is easy to believe in cases which are intercurrent or sequelæ in infectious diseases. It is not conceivable that exposure to cold could directly affect the kidney more than other organs. It is probable that its well known agency in this disease is connected with the production of substances, which the kidney must deal with in greater quantities than it can bear.

If the substance in the blood with which the kidneys are concerned were totally incompatible with health, it would be necessary to place the organs next the heart so that they could deplete all the arterial blood before it is distributed to the tissues. Their position on a branch, not large in comparison with the main current, shows that incomplete depuration of the blood is sufficient. It is not easy to understand the causal connection of hypertrophy of the heart with Bright's disease. Evidently it develops in response to a condition of the blood in which the substances to be removed by the kidneys tend constantly to exceed the proportions compatible with health. The hypertrophy of the heart is compensatory to the destruction of a part of the kidney just as much as in valvular disease. By this means the blood is driven at a higher pressure through the lessening intact part of the kidney, which in this way can act on as great a part of the blood as in health. The morbid anatomy was discussed; it was pointed out that both interstitial and parenchymatous changes were found in all cases, so that the classification into interstitial and parenchymatous nephritis, though convenient, is not strictly correct. Probably (after excluding waxy disease) the best division is into acute or chronic parenchymatous and interstitial nephritis.

This division is justified by difference in morbid anatomy, as well as clinical history. They are probably only varieties of one disease, and therefore there may be some cases of uncertain classification. The course, symptoms and diagnosis of these forms were detailed. Interstitial nephritis, the most insidious, presents the greatest difficulty. Albuminuria is but transient, dropsy usually absent, while the eye-ground is inaccessible to the majority of physicians. If there is hypertrophy of the heart without defect in its mechanism, arteriofibrosis is so marked that the radial artery can be felt like a cord against the bone below the point where it is compressed by the finger; accentuation of the second sound of the heart over the aortic area, with *persistent* low specific gravity of the urine, that is, with a *persistent* deficiency in the quantity of solids which it is the duty of the kidneys to excrete, diagnosis of interstitial nephritis is justified.

Since Bright's disease is often insidious the disturbances must be borne in mind which it may cause. Tendency to bronchitis, dyspnœa, neither due to heart disease, emphysema or asthma, repeated attacks of diarrhœa, or vomiting on slight provocation, are among those which should lead the practitioner to entertain the possibility of Bright's disease. As to uræmia, which is sometimes the first sign of the disease, it should be remembered that it may appear as headache, mental wandering, delusion, or even mania. Albuminuria is always a symptom of great importance. Probably all physicians are aware that albuminuria is not a pathognomonic sign of Bright's disease, but there are not a few who suppose tube-casts to be an inevitable sign. Practically, tube-casts and albuminuria go together; the same causes seem to produce both. From what has been said of interstitial nephritis, it is evident what caution must be observed in pronouncing a subject free from renal trouble after an examination of his urine. On the other hand if a faint cloud of albumen is found, what are we to say? Albuminuria is in the great majority of cases due to Bright's disease. The proof of that is that not an outside cause should be found. Doubtless, albuminuria never exists without disorder of the kidneys. This disorder is generally secondary as cyanosis due to heart disease or biliary intoxication. The disorder is probably functional and unimportant at times. Functional albuminuria is said to be not uncommon at about the age of puberty. The odds are heavy against the health of a grown man free from jaundice who has albuminuria.

Dr. Grube—I was pleased with the doctor's remarks, and, as I have given this subject a good deal of attention, have had a great deal of experience in making analyses. I am glad he

has brought out several points, and none more so than that both albumen and casts may be found in the urine, with at least no serious trouble in the kidneys. I have found both, and afterward had the privilege of examining the kidneys post-mortem, and could find no trouble there. Because we find a few casts, because we find a little albumen, we often come to the conclusion that the patient is suffering from Bright's disease, when that probably is the smallest factor in his trouble. Now on this point I want to tell my own method of searching for casts. I take a low power, not more than one-half inch, which gives a wide field. I put five or ten drops of urine on the slide without using a cover glass, and in that way if there is a single cast in ten drops it is possible to find it. A thing which must not be overlooked is that casts are so transparent that if you have not a very low light they become entirely transparent, and you can not see them at all. As long as the specific gravity is high enough and the amount in twenty-four hours is sufficient to show that the renal function is being performed the patient may live in comfort, if hygiene is attended to, and therefore we have less field for treatment and management, mainly a question of diet. Prof. Dixon is a great admirer of the skim-milk treatment; not that anything it contains has a good effect, but it gives rest to the kidneys. You want to give a diseased kidney rest, and to do that minimize the diet by giving skim milk.

Dr. Shaw—I agree with the last speaker in reference to finding casts with a low light. With a very strong light you can not see them at all, but with almost no light they come in view very readily, when otherwise they might be overlooked.

Dr. Shaw then referred to two cases met in life insurance examinations, in which slight digestive disturbances alone indicated ill health. The urine, however, showed a faint cloud of albumen and contained tube casts. Both these men were considered healthy by their physicians, yet both were dead in the course of a few months.

Dr. Batten—This was a very interesting subject the doctor read upon this evening, and I am sorry he did not go into it a little farther. Now, there are a great many cases that come under our observation that require very skillful treatment. I remember the first case that came under my observation several years ago, when treatment was not as well understood as it is now, and I remember that I gave a very unfavorable prognosis, and I treated the case with compound jalap powder and so on, and to my astonishment the patient got well. I had another interesting case of that sort, that came under my observation, in a man who had an acute nephritis from sitting

on the ground. It was in April. My treatment was hot baths and the compound powder and poultices over the bowels. The question of prognosis in these cases of chronic albuminuria, I think, is very important. For instance, a man may have only one kidney attacked with chronic nephritis; if we only thought there was one kidney affected we could give a very favorable prognosis. Again, only a part of the kidney may be affected; in such a case the prognosis would be favorable. In regard to the treatment of nephritis, we have an increased blood supply to the kidneys. We should prevent this increase of blood and endeavor by some means to dilate the vessels so that the blood can escape. Now, to do this, it would be necessary to prescribe some drug that would prevent the heart's increased action, and in addition to that give a remedy that would dilate the vessels so that the blood could escape from the kidneys. For the first we have digitalis, and for the second we have extract of belladonna. With these drugs prescribed in a scientific manner and with the proper diet, I think the patient would be very greatly benefited.

Dr. E. G. Matson—The last speaker thought a single kidney may be affected by Bright's disease. I have never seen the description of such a case. It is true that in autopsies one kidney is often found more extensively altered than its fellow.

Dr. Batten—I have a case that I would like to bring before the society. A woman gave birth to her fourth child on January 15. On the 16th of the next month, after washing all day, she was taken with puerperal peritonitis. The question arises in my mind how did this contagion enter the system one month after the child was born? Dr. Batten also described a case of mammary abscess without abrasion of nipple.

Dr. Duff—As we see the subject to-day, I think that we ought to speak of these troubles under the heading of puerperal infection. If there was peritonitis in this case, which was puerperal, and it was the result of infection, it would come under the head of what is generally known as puerperal fever, unless we could determine that it was in her system for some time before. Prof. Hurst and others say with regard to the abscesses formed in the mamma that they can not occur unless there is an abraded surface on the nipple, but on the other hand, it is asserted there can be abscess of the breast where there has been no abrasion or cracking of the nipple, and it is caused by the staphylococcus which has been introduced through the blood. In Dr. Batten's case germs may have been introduced through the blood. I believe I heard Dr. Murdoch several years ago, when the germ theory first came

out, say there could not be a drop of pus in the body unless we had one of those little animals introduced there first. If it is not possible to have a drop of pus, it is just as impossible to have puerperal peritonitis or infection without introduction from without or through the blood.

Dr. Buchanan—I understood Dr. Batten to say that thirty days of the puerperium had elapsed before trouble commenced. I think this woman had a trouble which was not puerperal. She had passed her puerperal period. If this woman had had any elevation of temperature, any infection of the tube with a production of pus in that tube, and at the end of thirty days had had a leaking or a rupture, causing peritonitis, then it might be called puerperal fever, but if she had passed, as I understood, thirty normal days after labor, I think we would have to bring some other cause in to account for this peritonitis.

REPORT OF TWO CASES OF STONE IN THE GENITO-URINARY PASSAGES. BY DR. THOMAS.

The first case was one of long standing. The patient complained of urinary trouble for three or four years. It was suspected that he had a calculus in his bladder. Yet his bladder had been examined by some very capable gentlemen several times, and they never were able to detect a calculus in his bladder. I examined him myself three or four times, but I could never detect anything in the bladder. In addition to trouble in the bladder he also complained of his right side, and finally the trouble in his right side appeared to annoy him more than anything else. Not being able to discover anything in the bladder I suspected that it existed in the right kidney.

At the urgent solicitation of the patient I cut down upon the right kidney about the end of June, and manipulated it thoroughly, but failed to discover any evidence of stone in the kidney. The wound healed finely, without any pus, in three or four weeks. The patient complained afterward of trouble in his urinary apparatus. Dr. Martin sounded him with a searcher and discovered a stone in the bladder, and the result was what I show you here. (The extracted stone was here shown.) Now the question is whether the manipulation dislodged it from the pelvis of the kidney, or whether the calculus had not been in the bladder all this time. Dr. Banks, of New York, discovered a calculus in the bladder three or four times, though the patient had been examined by very able men in New York City, who failed to discover it, and he claims if you can not discover one the better plan is to put the patient in bed, and very often you can discover a stone where you could not

without this preparatory treatment. The peculiarity of this case, as well as the case following it, is that the patient should go around so long without the discovery of so large a stone. This stone weighs over nineteen drachms.

The second case was sent to the South Side Hospital. He had been suffering for three years with urinary troubles, and in the meantime he had acquired a gonorrhœa. This patient was treated by six or seven physicians in this city. He had had no control of the sphincter for a long time; about every half minute he would eject what urine was in the bladder. I suspected from the statement that he made that I would find a very tight stricture. I first passed in the searcher and found a stone. I think it was removed on July 7. This is an oxalic acid calculus. The patient had been suffering for fifteen years, and it was never discovered until he came to the city. I had my reason for performing lithotomy instead of litholapaxy; the bladder was inflamed and contracted, and I thought by this operation perfect drainage would be secured, and the bladder get a long rest, and in that way recover. The first patient left the hospital in twenty-one days, while the second one expects to leave to-morrow. Both have made a wonderful recovery. The second patient's temperature went up to 106 on the second day, then it gradually went down, and in four days was about normal, and remained so since. These cases went on for a long time; if they had been discovered earlier the calculi might have been removed without much trouble. This smaller one weighs six drachms plus. I think the first patient had been examined by Drs. Wood and Martin. I could use the cystoscope and pass it around his bladder, yet I failed to discover anything in the bladder with that, or by the use of a searcher, and it was strange to me if it was in the bladder that it could not be found.

THE AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.

A very full programme is announced for the coming meeting of the American Electro-Therapeutic Association, which is to be held in New York, at the Academy of Medicine, 17 West Forty-third street, October 4, 5 and 6.

There will be two interesting discussions, one upon "The Relative Fœticial Value of the Different Currents and their Application to Ectopic Gestation," to be discussed by many prominent Gynecologists and Electricians, and another upon "Cataphoresis and its Practical Application as a Therapeutic Measure."

Papers are announced by Drs. Geo. J. Engleman, Wellington Adams and Geo. F. Hulbert, of St. Louis; Wm. F.

Hutchinson, of Providence, R. I.; Franklin H. Martin, of Chicago, Ill.; A. Laphorn Smith, of Montreal, Canada; R. J. Nunn, of Savannah, Ga.; Thomas W. Poole, of Lindsay, Ontario; C. Eugene Riggs, of St. Paul; W. J. Herdman, of Ann Arbor, Michigan; D. S. Campbell, of Detroit, Michigan; G. Betton Massey, of Philadelphia; Henry D. Fry, of Washington, D. C.; H. E. Hayd, of Buffalo, N. Y.; J. H. Kellogg, of Battle Creek, Mich.; C. G. Cannaday, of Roanoke, Va.; Ernest Wende, of Buffalo, N. Y.; and Wm. J. Morton, Augustin H. Goelet, A. D. Rockwell, Landon Carter Gray, Robert Newman, Ephraim Cutter, Frederick Peterson, G. M. Hammond, F. Van Raitz, of New York, and many others. Dr. J. Mount Bleyer will give an instructive lecture, with demonstrations, entitled "The Phonograph and Microphonograph, the Principles underlying them and their Uses in the Sciences."

In connection with the meeting, there will be an exhibition of Modern Medical Electrical Apparatus, all the prominent manufacturers being represented.

The social part of the programme includes many pleasant surprises.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION

Will hold its eighteenth annual session at Cincinnati, Wednesday, Thursday and Friday, October 12, 13 and 14, 1892. The programme is a valuable one, containing many of the most prominent names in the profession our country affords. It covers every department in medicine. The attendance will be unusually large, as Cincinnati is the centre of population of the United States. Not only the scientific, but also the social part of the meeting will be of the highest order. The interest of the convention will be augmented by the meeting of the gentlemen interested in the Pan-American Medical Congress, also other bodies of medical men. Dr. Benjamin Ward Richardson has written his earnest desire to be present. The association will be just in time and just in line for many of the gentlemen en route for the American Public Health Association in the City of Mexico. Among the many prominent gentlemen who are expected to read are the following: Dr. Hunter McGuire, Richmond, Va., president of the American Medical Association, the address on Surgery; Dr. Hobart Amory Hare, professor of Materia Medica Jefferson Medical College, Philadelphia, the address on Medicine. Papers are expected by Drs. Reed, Ricketts, Hall, Dowling, Ayres, Connor, Ransohoff, Dandridge, Comegys, Whittaker, Zenner, Zinke, Cincinnati; Cook, Woodburn, Thompson, Indianapo-

lis; Owen, Walker, Evansville; Lydston, Moyer Bel-
field, Chicago; Mathews, Wathen, Larrabee, Reynolds,
Louisville; Savage, Nashville; McGahan, Chattanooga;
Dixon, Henderson; Hughes, Love, Loeb, Dalton, Boerck,
Bond, Hulbert, McIntyre, St. Louis; Lamphear, Kansas City;
Smith, Montreal; Sutton, Murdock, Daly, Pittsburg; Early,
Ridgeway, Potter, Buffalo; Baker, Cleveland; Thorn,
Toledo; Walker, Detroit; Baldwin, Columbus; Bond, Rich-
mond.

E. S. McKEE, M. D.,

C. A. L. REED, M. D., *Secretary, Cincinnati.*
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TRI-STATE MEDICAL SOCIETY

OF ALABAMA, GEORGIA AND TENNESSEE.

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ents, E. T. Camp.

The fourth annual meeting will be held in Chattanooga,
beginning Tuesday, October 25, 1892. The session will last
three days. All physicians are cordially invited to be present
and participate in the proceedings either by reading a paper
or discussing the subjects that will be presented. Already a
number of papers have been promised and all indications point
to amore successful meeting this year than ever before. Should
any one desire to read a paper, report a case, or present a
specimen, notify the secretary of the fact at as early a date as
possible, giving title of the production. A circular will be
issued about September 1, giving papers promised at that time,
also a list of exhibitors who expect to be present.

List of papers for the fourth annual meeting:

CHATTANOOGA, October 25, 26, 27, 1892.

Eye Symptoms in General Disease, J. L. Minor, Mem-
phis, Tenn.

Talapes Equino-Varus (with presentation of patient), C.
W. Barrier, Rome, Ga.

Sequences of Otitis Media Purulenta, T. Hilliard Wood,
Nashville, Tenn.

Report of 1050 Strabismus (cross-eye) Operations, with
some observations on the same, A. W. Calhoun, Atlanta, Ga.

Pharmaceutical Preparations of the Present Day, Jno. C.
LeGrand, Anniston, Ala.

A Clinical Study of the Relation between Scarlet Fever and Diphtheria, W. D. Hoyt, Rome, Ga.

The Treatment of Inguinal Hernia, J. W. Handly, Nashville, Tenn.

Fistula in Ano, Andrew Boyd, Scottsboro, Ala.

Stricture in the Male Urethra; its diagnosis and treatment, W. L. Gahagan, Chattanooga.

Phymosis, Erasmus T. Camp, Gadsden, Ala.

The Rational Treatment of Enlarged Prostate in Old Persons, Geo. Wylie Broome, St. Louis, Mo.

Advanced Theories in Psychical Science, John E. Purdon, Cullman, Ala.

Drunkenness and Its Gold Cure? John P. Stewart, Attalla, Ala.

Surgery—Things to Do and Things Not to Do.

A Few Selected Cases in Laparotomy, W. H. Wathen, Louisville, Ky.

Extra-Uterine Pregnancy, Richard Douglass, Nashville, Tenn.

The After-treatment of Abdominal Operations, W. E. B. Davis, Birmingham, Ala.

Hepatic Abscess, E. B. Ward, Selma, Ala.

Report of Treatment of Sterility, J. M. Head, Zebulon, Georgia.

Titles not announced: Jno. L. Howell, Knoxville, Tenn.; J. M. Masters, Knoxville, Tenn.; C. S. Briggs, Nashville, Tenn.

The committee has secured a one and one-third rate from the railroads on the certificate plan. There will be a large number of exhibits at the meeting, and the session promises to be one of unusual interest.

The present membership of the society is 212, and it includes some of the best men of the profession from a number of States. All will be welcome to the meetings of the society, but the membership is limited to graduates of regular medical colleges residing in the United States.

N. O. Medical and Surgical Journal,

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Articles from physicians are respectfully solicited. All articles, news and exchanges, and books for review, should be sent to the EDITOR, NEW ORLEANS MEDICAL AND SURGICAL JOURNAL. Business communications should be addressed to the BUSINESS MANAGER, NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

EDITED AND PUBLISHED BY

AUGUSTUS McSHANE, M. D

COLLABORATORS:

DR. F. W. PARHAM.

DR. H. W. BLANC.

DR. A. W. De ROALDES.

DR. R. MATAS.

DR. JOHN DELL'ORTO.

Editorial Articles.

ARTERIOTOMY FOR THE RELIEF OF SUDDEN CONGESTION.

Blood-letting is one of the oldest of therapeutic measures. Practised from the remotest times, it came to be regarded, in the imperfect state of medical knowledge, as one of the most potent weapons against disease, as well as one having almost universal application. Blood-letting is a good thing; but, like many good things, it became abused, and finally fell into disrepute. Lately, however, there have been symptoms of a revival of the method of Dr. Sangrado, though in a milder form. We have read reports of a learned medical body in Great Britain gravely discussing the benefits to be derived from phlebotomy. If the shades of any of the practitioners of long ago were hovering around, they must have yearned for the power to tell but a small part of what they knew about blood-letting and its uses to those who spoke of the practice as they would speak of some new thing.

Blood-letting is of undoubted value in certain conditions. Opening the median-basilic vein was the practice chiefly resorted to, and when we speak of general blood-letting the

image of a bare arm bound with a handkerchief and with veins distended comes before our mental vision. But there is one method of blood-letting that has not received the amount of attention it deserves. We refer to arteriotomy. Some years ago nine cases of acute cerebral meningitis came under our observation at the Charity Hospital; the only cases that progressed favorably were those that had been bled freely (phlebotomy). Subsequently a case came under our notice which required a more rapid abstraction of blood than phlebotomy could secure, and arteriotomy was resorted to.

We have brief notes of five cases of sudden cerebral congestion, in which arteriotomy was of distinct service. Four of these cases were patients of Dr. R. Matas and one of Dr. A. McShane. We do not doubt that many similar cases occur in the practice of various physicians, and these records are given to the profession in the hope that they may bear fruit in cases where the usual measures fail to give the desired relief.

I.—G. H., confectioner, aged 45, habitual hard drinker. In the summer of 1885, while preparing some candy to ornament a cake, on a hot afternoon and while working over a very hot fire, was suddenly overcome by the heat. He fell almost unconscious; became incoherent and began to "blow for air." When seen at his home shortly after the occurrence, he presented a remarkable appearance, which instantly suggested an overwhelming cerebral engorgement. The patient's face and neck were deeply suffused, crimson in color, the conjunctivæ were deeply injected; the temporal pulses tortuous and throbbing violently, the head hot, patient talking wildly, and frequently blowing as in stertor, but evidently much prostrated. His appearance suggested the thoughts of impending apoplexy. With a full knowledge of his alcoholic habits and particulars of the attack, Dr. Matas did not hesitate to cut both anterior temporal arteries. A free hæmorrhage followed, which was encouraged by washing away the clots as fast as they formed. Several ounces of blood were thus quickly abstracted from the circulation, and it was very remarkable to notice the prompt and almost immediate benefit that followed the procedure. The intelligence appeared to

return as fast as the blood escaped from the cut arteries, and before an hour had elapsed the mind had been cleared and the patient restored to consciousness. As soon as improvement became manifest, the arteries were completely cut through to allow them to retract within their sheaths, and the hæmorrhage controlled by the application of firm pressure with a head bandage. Ice bag was applied to back of head; and internally, croton oil followed by large doses of potassium bromide. The patient was out of his room the next day.

II.—A deck hand, white, aged 31, working on a steamboat on the river, alcoholic habits. On a hot summer afternoon indulged in much iced beer, and while drinking with some women was taken with vomiting and fell unconscious and almost comatose. He presented symptoms of great cerebral hyperæmia; crimson face, injected eyes and throbbing temporals. Both temporal arteries were cut as in preceding case. Improvement followed more slowly than in previous case, but nevertheless after the loss of about eight ounces of blood he quieted down. The stertor disappeared, and he gave signs of returning consciousness. Ice bag and potassium bromide was administered freely after liberal purgative with croton oil. Complete recovery in two days.

III.—E. V., aged 28. Puella publica, alcoholic subject. After copious libations of mixed drinks and a round of orgiastic excesses fell unconscious, with signs of threatened apoplexy. Face deeply red; cutaneous capillaries so injected that they actually dyed the face purplish-red; throbbing arteries and rapid, bounding pulse. Gave emetic and croton oil, ice to head, and seeing not sufficient improvement, bled from temporal arteries. Consciousness returned slowly; convalescence was protracted, but patient recovered excellently.

IV.—A. L., Mexican, aged 38. Without any apparent cause he fell unconscious in stupor and coma; paralytic (hemiplegic) symptoms began to develop. Gave croton oil, ice cap to head, and cut both temporal arteries. The symptoms continued to grow worse, and finally the patient died in a few hours of a progressive cerebral hæmorrhage.

“In this case,” says Dr. Matas, “in view of the occurrence of paralytic symptoms, I should have preferred (had it been

suggested there) the application of a ligature to the common carotid on the side opposite the paralysis, as suggested by Horseyley."

Dr. McShane's case was one of tertian intermittent fever. The patient was a strong Irishman, of fair habits. He had been in the Charity Hospital for several days, and he had had a slight chill at about 5 A. M. on the day it became necessary to cut his temporals. The paroxysm had not been as severe as previous ones, on account of the medicine he had taken. Dr. McShane saw him at about 10 A. M., at which time he was perspiring gently, and the paroxysm seemed to be wearing off. After speaking to the patient for a few moments, the doctor passed on to the other patients in the ward. In about five minutes, stertorous breathing was heard, and the patient was seen to be lying on his back, unconscious, and breathing very heavily. The respirations became less frequent, and finally ceased altogether. Artificial respiration was performed for about a minute, while a scalpel was sent for. The median-basilic vein of his right arm was cut, but the surface was pale, the heart beating feebly, and very little blood came. The other median-basilic vein was cut, but the flow of blood soon ceased. Recalling Dr. Matas' experience in a similar case of sudden congestion of the brain, Dr. McShane cut both anterior temporal arteries. These vessels spurted very feebly; the heart's action was embarrassed. There was some escape of blood constantly from each of the four wounds; and in a short time not less than twelve ounces were abstracted. It is impossible to state exactly the amount of blood lost, but, though quite large, it was not more than a big, powerful man could easily spare. The effect of the loss of blood was surprising. In a few minutes (during part of which time artificial respiration had been kept up) the patient breathed naturally, and soon was awake. He was a much startled man. He wanted to know why he was where he was instead of among the flowers and beautiful landscapes that had charmed his inner self during his spell of unconsciousness, and while his medical attendants were doing all they could to recall him to this mundane sphere. The man vowed that he had been in the celestial regions, for such beautiful sights as he had beheld during excur-

sion to the regions of the unknown had never been imagined by mortal minds. After his return to earth the patient was nervous and fearful of another congestion; but he went on uninterruptedly to recovery, with no other treatment except that directed to the malaria. * * * * *

In all these cases the necessity for prompt interference was apparent, and in cases in which the cerebral vessels have been weakened by previous alcoholic excesses, the early relief afforded by arteriotomy might be instrumental in preventing a rupture of some atheromatous artery.

THE CHOLERA.

When we last wrote concerning the cholera we were in a position to sympathize with several countries of northern Europe. We had great faith in the ability of the health authorities of the larger seaports to keep out the plague. Now, however, things are changed. Our most important port of entry, New York, has exposed its utter unpreparedness for the handling of large numbers of people from infected localities. It can not be from lack of funds that New York finds herself the object of censure from all sides, since the quarantine revenues are very great. We must look to the political aspect of the case for an explanation of New York's primitive and inefficient methods of maritime sanitation. When the pressure of public opinion shall cause the guardianship of the public health to be no longer a reward for local political partisanship, we may reasonably expect that New York will wake up and adopt some rational method of fighting foreign pestilence. New York will not have to look very far, and will not have to do any thinking, for the problem in all of its phases has been worked out right here in Louisiana. The Holt System of Maritime Sanitation, with all the improvements suggested by a practical experience of eight years, embodies the application of all the theories of science and common sense. The sanitarians of New York need but adopt what we are doing as a routine practice, in order to put their city in a condition to

command the respect of intelligent people, instead of arousing their ridicule.

Unfortunately for New York, however, there seems to be a deep-rooted impression in the eastern cities that no good thing can come out of Nazareth, or New Orleans, either. A bare inspection of the methods in constant use on the lower Mississippi would convince any fair-minded man of their thoroughness and their superiority over anything of the sort employed at New York.

In the Marine Hospital report for 1890 there are specifications and drawings of a portable disinfecting apparatus; it is a railroad car provided with some of the features of the Holt system. The idea might be applied also to floating structures. A quarantine station, or disinfecting station, could thus be transferred from place to place, and in times of emergency a number of these could be concentrated at the threatened point. If a fleet or a train of such movable disinfecting structures could be collected now at New York the work of the health officer would be lightened, the wheels of commerce would not be blocked, and what is of more importance, the work of disinfecting would really be done, and no dangerous material allowed to bring in the pest.

* * *

We have received advance sheets of a paper that will appear in the *Medical World*, of Philadelphia. It is entitled "The present danger from cholera, as shown by a study of past visitations." Certain portions of the paper are of interest to us. The author says: "In 1873 we had another, and the last visitation to date. Starting, as usual, with the fanatical pilgrimages of the Oriental, it overspread Russia, where its progress was made sure by the Russian 'holy' city, Kief, and the great fair at Nijni Novgorod. It was let into New Orleans by the innate depravity of the same quarantine officer who also passed the yellow fever into the port in the same year, for which latter offence he was dismissed. He utterly failed to give a satisfactory account of the vessels arriving during January and February, 1873, when required to do so by the Secretary of State. The epidemic broke out in New Orleans, February 9, 1873. It rapidly spread to the towns

along the navigable tributaries of the Mississippi river, and from them, by railroad connections, to the interior.

* * * We have seen that in the four principal epidemics with which the United States has been scourged, one was admitted almost simultaneously in Quebec and New York, by inefficient quarantine, one at New York and New Orleans by reason of the same neglect, one at New York alone, and one at New Orleans alone."

In perusing this production of the learned Philadelphian, we are filled with admiration for the acumen displayed in distinguishing the depravity of the quarantine officer as innate; it was not such a depravity as might be inoculated into a good and honest man by contact with Tammany toughs; it was innate. Poor man! We hope that when his eye passes over these lines he will not become despondent upon learning that his depravity is innate, and must ever be with him in his declining years.

Another point that comes up is this: In 1873 New York and New Orleans were both supplied with imperfect and inefficient means of combating pestilence; in 1892 New York is still supplied with primitive appliances, while New Orleans is protected by the best system that has ever been devised for the exclusion of plagues. But we fear that it will be a long time before New York can so far overcome her *amour propre* as to acknowledge that she can learn anything from a city that she has superciliously regarded as the tail end of nowhere. So much the worse for New York.

As there has of late been considerable agitation in this city concerning an ordinance calling for a medical inspection of prostitutes, it is interesting to know how such a law has acted in other countries. We print elsewhere in this issue a memorial from Japan, which gives the substance of the question in a nutshell.

Abstracts, Extracts and Annotations.

MEDICINE

ALCOHOLIC PHTHISIS.

Hector McKensie (Clinical Lecture, Brompton Hospital, London, June 17, 1891. Personal Report) gave his experience in relation to phthisis in alcoholic subjects, as found upon the examination of cases, their course, and observations made on post-mortem examinations. It was remarked by the lecturer that the subject was one of great importance and very little had been written upon it, some authorities denying altogether any relation between alcoholism and phthisis, but there was conclusive proof that alcohol did very markedly modify and control the disease. In a series of seventy-five post-mortem examinations on alcoholics, tubercular lesions had been found in each case. Of this number, sixty-seven had the lungs principally affected.

In the remaining cases the lesions were found in the peritoneum and pleura. Hepatic cirrhosis was found in forty-five cases. Miliary tubercles, cheesy degeneration, consolidations and excavations were found. The cases where an excess of connective-tissue formation existed were very few. The vomicæ were generally small and their presence frequently was not found during life. In only ten of the seventy-five cases was there any family history, making a marked distinction from non-alcoholic forms of the disease. The diagnosis in many cases, especially early in the disease, could be made only by examination of the sputum, as the phthisical symptoms might be masked by the hepatic and nervous. Repeated examinations of the lungs were necessary. When tubercular formations once commenced, the progress was very rapid, and a fatal termination almost inevitable. The patients were sometimes fat and pasty, and again emaciation was present. The circulation was always bad. The lecturer here stated that he believed in all cases of consumption the best guide in prognosis was the pulse. Troublesome cough is usually present. The treatment is unsatisfactory. It is best not to use alcohol in any form, as the habits of the patients would probably cause the amount prescribed for medicinal purposes to be exceeded, with the most harmful results. In all cases of marked alcoholism, even when the liver or the nervous system seem to be

the part affected, examination should be made of the lungs. If there is ever expectoration, the sputum should be examined.
—*Brooklyn Medical Journal*.

THE KYOTO MEMORIAL FOR THE ABOLITION OF LICENSED
PROSTITUTION IN JAPAN.

ADDRESSED TO MEMBERS OF BOTH HOUSES OF THE IMPERIAL
DIET, THROUGH THEIR PRESIDENTS.

KYOTO, December, 1890.

*To H. E. H., Count Ito Hirobumi, President of the House
of Peers, and to the Hon. Nakashima Nobuyuki, Presi-
dent of the House of Representatives:*

Your memorialists regard the twenty-third year of Meiji, destined as it is to be memorable in the history of Japan, as a fitting time to call attention to the existence of an evil full of danger to the nation's welfare. We refer to Licensed Prostitution. We earnestly ask for our memorial, and for the proofs and reasons affecting the system which it adduces, the serious and unbiased consideration of the members of both honorable houses, concerned, as they are, in legislating for the moral and social well-being of our countrymen.

History.—Licensed prostitution was first suggested by Aulas in the year 1762, and again by Restif de Bretonne in the year 1790, and was brought into operation on the eve of establishing the French Empire in 1802. The system spread throughout Europe, and in 1866, through the influence of army and navy men, a bill was brought into the British Parliament and reported again in 1869, when, under the title of Contagious Diseases Act, and therefore without the special investigation its exceptional character demanded, it became a law throughout the British empire and her colonies. To "protect" the soldiers and sailors then in Japan and coming to these shores, a hospital for the treatment and examination of prostitutes was, at the suggestion of Naval Surgeon Dr. Newton, established in Yokohama in September, 1867. In 1872, under the supervision of Dr. Hill, the system was extended to Tokyo and the open ports of Kobe and Nagasaki, and later (1876) the government established the system in nearly all the cities and prefectures of the empire.

The system began in Europe at a time of disturbance, when human rights, human dignity, individual liberty and social and hygienic laws were greatly neglected or unknown,

and, by the influence of those who have placed the physical welfare of the few above the social and moral well-being of the many, and, in the absence of positive knowledge as to the physical results of the system, it has been handed down to us of the present time. It becomes us now to examine the system for ourselves and judge of its value in the light of our own and the world's experience.

Principles of the System.—The system requires (1) that each public prostitute be registered and pay health money to the government; (2) that, whether well or ill, she be examined every week by government physicians; (3) that, if well, she have a certificate of health; and (4) that, if diseased, she be detained in the hospital for treatment; the object being:

The Object.—To enable men to satisfy carnal propensities without contracting contagious disease.

The System is Wrong, and Therefore Dangerous to the Welfare of the State.—Such a system is wrong, and therefore dangerous. No government can ignore the moral welfare of the nation it governs. If it attempts to regulate vice by license, and thus gives sanction to sin, the moral sense of the country is weakened and perverted, and fruit is borne to the nation's weakness and dishonor; and this result is already witnessed on every hand. Honored by state protection, venal love is seen in literature, in society, and even in public entertainments, and it maintains itself, made respectable by official sanction and authority. It corrupts the family life, blurs the distinction between good and evil, and, permitted, as it is, to flaunt itself in public, attracts, by its dazzling luxury, the gaze and admiration of thoughtless people. Witness the general and marked attention a prostitute receives in the street to-day when, to represent her guild, she dresses in silks and brocades, and, as at the Yoshiwara or at Kyoto, parades in public.

Corrupts Marital Relations.—In France, where the pernicious system first found birth, and at present exists, marital relations have become corrupted and perverted to such a degree that adultery is of common occurrence, and births out of wedlock in the department of the Seine in 1873 were more than 25 per cent. of the entire number; and in European nations where the system has been longest tried the cry is heard to-day from government and from people: "Immorality is sweeping over us."

In this system of license it is sought to protect the bodily health of the individual; but if in this attempt the morals of the nation are corrupted, vice is fostered, seeds of iniquity are sown broadcast in the public mind, and the opportunities for

the propagation of immoral disease indefinitely multiplied, as is always the case, then, when wrong is done that evil may be averted, evil ultimately increases; and Japan's experience affords no exception to the rule.

The System is Deceptive.—The excuse is made that public prostitution is licensed in order that secret prostitution may be lessened; but no steps are taken by the government to enact and enforce laws against this latter form of vice; and instead of its being lessened by the system, statistics go to show that license has a contrary effect. For instance, in Nagasaki, Aichi and Kanagawa prefectures, where the system of license obtains, the percentage of *unlicensed* prostitutes to the entire population, by official report in 1887, was .022; while in Gifu, Wakayama and Kagoshima, where no license exists, the whole number was but .010.

The System Encourages Crime.—The system not only corrupts morals; it encourages crime, through the temptations incident to the lavish expenditure of money which it demands, and other evils attending it. In Kanagawa, Nagasaki and Aichi, where the system is in force, the ratio of criminals to the entire population is .76 per 100; while in Gifu, Wakayama and Kagoshima, where the evil is not licensed, the ratio is but .49 per 100.

It is Unjust.—The system is radically unjust. Woman, capable of honorable employment, is degraded, made an object of barter to satisfy the lust of men, and encouraged to follow a life of sin. It compels, too, the examination of one sex only, and does incalculable violence to the feelings of woman, many of whom enter upon a life of prostitution in this country, not from choice, but at the command of parents or guardians. The words of Victor Hugo are forcibly applicable to Japan to-day: "They say slavery has disappeared from European civilization. This is an error. It exists always, but it weighs only on woman—it is called prostitution." Indeed, it may be plainly said, there was never a measure which showed more plainly the sex that devised it than this system of license, and never one which showed more the brutal side of man's nature. It is a scheme to protect man in his baser impulses at the expense of woman; and society is corrupted in the effort.

The System Is a Failure.—Has the system of supervision, whether in Europe or Japan, diminished immoral diseases? No. At the International Medical Congress held at Vienna in 1870, it was declared that these diseases have increased in Europe rather than diminished; and in the same international congress, held at Amsterdam in 1879, Dr. Kraus, of Vienna, pre-

sented elaborate statistics showing that these diseases were more prevalent than ever, notwithstanding strict police and medical regulations, and Lacour, chief of police of Paris, who had full authority from his government to spare no expense necessary for the complete enforcement of the system, declared, after years of faithful effort: "The evil must be overcome by moral, not by legislative means;" and six years later (1876) added: "This state of things reveals the existence of a social malady which no mere police measures are able to cope with and destroy." Later (1888) a committee of the medical society of Zurich, under the direction of Professor Stukowenkof, made a report upon prostitution and the spread of syphilis, in which they "condemned as ineffective all attempts to regulate prostitution by the State;" and Great Britain, after nineteen years of trial, during which it was occasionally found that troops stationed in "protected" districts suffered more from contagious diseases than when stationed in other places, declared the system a failure, and abolished it throughout all her realm and its colonies.

No. The experience of Europe loudly declares that "protection" does not protect; and this, with our present knowledge, we should expect. How is it in Japan? The system has now been tried about twenty years. Have immoral diseases disappeared? Has clandestine prostitution diminished? Have illegitimate births ceased? No. On the contrary, it is the general and widespread impression that prostitution has greatly increased, and syphilitic and gonorrhœal diseases are not lessened. Early statistics are very meagre, or wholly wanting in Japan, so officials declare, so that comparisons are difficult to institute; and yet sufficient information can perhaps be gathered for instructive conclusions, especially when combined with the observations of physicians.

For the navy the earliest statistics we have are for 1887. These show that syphilis and gonorrhœa exceeded by more than four times any other disease, the ratio of cases per 1000, of the force for the year under review, being 99.5, or about one in every ten; and for the year 1889, according to the report of the medical director general, the number per 1000 is 126.2, or more than one in eight.

This ratio is very large; and yet if the beneficial effects of the system are seen anywhere they should be seen here, where men can be kept under strict medical control and examined from time to time, as well as the prostitutes with whom they may consort. In civil communities, however, the conditions are different, and such medical control is impracticable. Add to this the fact that the confidence of the people in the

protective power of the system leads to increased exposure to danger, and it may be fairly questioned if the system does not augment rather than lessen the sum total of syphilitic misery in a community. When the system is applied to the nation at large, therefore, even more than to the army and navy it becomes a failure and a curse.

The statistics afforded by the Osaka General Hospital (Government) are as follows: For the sixth year of Meiji (before the license system was established) in every one thousand patients treated ninety-eight had syphilis or gonorrhœa. Six years after the system was introduced the ratio was, per one thousand, one hundred and seven and two-tenths. This shows certainly that the system has not diminished the disease in the western metropolis.

And what is the result among the prostitutes themselves? If disease is lessened anywhere it should be among them; but what are the facts? The statistics of the Lock Hospital of Kyoto, a well-conducted institution of its kind, show that from the 12th to the 21st of Meiji the number of women constantly under treatment varied from 10 to 19 per cent. of the total number of prostitutes, the twenty-first year closing with 13 per cent.; while the number of licensed prostitutes increased in nine years from 525 to 756, besides a large increase, as well, in the number of unlicensed prostitutes; and this, too, in a city where the population remained about stationary.

These facts may surprise and disappoint some who look for relief in legislation; but to physicians who regard the subject from a scientific standpoint and in the light of modern experience, the reasons for failure are obvious. These reasons it would be improper to mention in detail in a public memorial, but among them should perhaps be mentioned a few: (1) The houses of ill-fame advertise "safety," because of government supervision, and multitudes, who would otherwise be deterred by fear, are willing to accept the promise and act upon it. Debauchery, therefore, is encouraged, and danger encountered. (2) Examinations are inadequate. Statistics show that in many who have been examined and receive certificates of health, disease breaks out within twenty-four or forty-eight hours, and before the next inspection of the health officer a number of men may have the seeds of a most terrible disease implanted in their system. (3) Experience shows that a prostitute may become a common carrier of syphilitic poison, herself escaping without contracting the disease; and (4) it is now clearly proved, what was for some time in doubt, that a public woman who has once contracted specific disease is capable of transmitting it, even though she may be, to all out-

ward appearances, perfectly sound. This last point proved, it follows that any amount of inspection by health officers as guarding against the spread of disease is, in a measure, futile. This fact supports the statement of Lacour when he said: "It is impossible to make a prostitute safe." (5) In proportion as the State gives license to this social evil does the tendency to it strengthen in the community, and an increase of clandestine prostitution is the result. Over this latter government can exert no control.

Condemned by Medical Men.—The system, therefore, long since condemned by the better moral sense of communities is now condemned by many unbiased medical men as ineffective, and as tending to foster vice and encourage the spread of disease. In proof of this, note the following:

The British Medical Journal, May, 1870.—"If the promiscuous intercourse of the sexes should increase among us (through this legislation) whilst, as is perfectly certain to be the case, it is still only partially freed from physical risk, it is quite possible that there may be no gain as regards the sum total of syphilitic misery. We may find that we have irretrievably lost immorality, and gained not at all in health."

New York Medical Record, August, 1876.—"We assert that the regulation system, as applied to ordinary communities, fails to prevent the extension of the disease."

The Edinburgh Medical Journal, November, 1877.—"In no country in modern times has prostitution been so much inspected and controlled as in France; and yet in no other country has there been such a steady diminution of a race."

Protest of Eight Hundred Medical Men.—We, the undersigned physicians, surgeons and general practitioners in the United Kingdom, after due consideration, hereby record our solemn protest, on religious, moral, social and sanitary grounds, against the application of the Contagious Diseases Act to the women of this country. We consider the measure to be fraught with a large amount of mischief, and calculated to do no good."

Dr. Mereur, medical inspector of public women in Paris, himself in favor of the system of licensed prostitution, wrote thus of the failure of the system of medical examinations: "What possible guarantee can it offer? This guarantee is very insignificant; and to say so insignificant that disease is especially caught from registered women."

Youthful Immorality Encouraged.—There is painful evidence, too, that youthful immorality is alarmingly prevalent. Not only are young girls trained with reference to this life, licensed, and, in a sense, made respectable by act of govern-

ment, but young men, catching the stories afloat of "safety," are plunging into crime in a manner truly appalling; and with what results, physical and moral, physicians of experience and observation too well know.

Looked at from every side, then, we must conclude that the license system is wrong in principle and ineffectual in practice; that it further degrades those fallen women to whom it may apply, and encourages immorality and crime among men; nourishes in the public mind the idea that vice is necessary, and paralyzes both that public and private effort which must ever be unceasingly and resolutely put forth against evil.

Those claiming to be practical men, however, will say, What will you suggest? Here is a "necessary evil" which must be controlled, and further, if regulated vice be abandoned, its development in clandestine form will be encouraged.

We would reply that such objection can not well be urged at the present day. The system we condemn has failed, utterly failed, to prevent the spread of specific disease, or of clandestine prostitution. On the other hand, it has, in many cases, directly contributed to the increase of both. This would seem to be not only true of Japan, but of every country where the system has been tried.

Other advocates of the system contend that prostitution is a business, and that its prosecution "must conform to the inexorable laws of demand and supply;" that "so long as the demand exists the supply will be forthcoming."

This is in a measure true, but we claim that the demand is increased (1) by the system itself, as already shown; and (2) by the wrong, radically wrong, education which the youth of the nation are now receiving in reference to these matters. On every hand physicians come in contact with the sentiment (and the deplorable results of it, too) that health demands the satisfying of the sexual appetite when maturity is reached. No more false and pernicious doctrine was ever taught. Man has been given procreative powers for the continuance of his species, it is true, but health never demands their exercise until they have been habitually exercised. The experience of all good men proclaims that "virtue is consistent with health."

The Remedy.—Your memorialists therefore contend that the most efficient remedy for this great social evil is not legislation, but education—an education containing a knowledge of the laws of health, of the dangers inseparable to prostitution, and of the principles of sound morality; and we respectfully submit that nothing could educate the nation more upon one essential point of preventive hygiene than for the government to proclaim the absolute impossibility of making sexual

prostitution safe, and to abandon all attempts to do so. Men will then realize the truth, and many will be deterred by fear. Not only this: we further contend that the State should array itself against prostitution as against cholera or any other contagious pest—repress it when it appears, and at the same time instruct the nation as to its dangers. And, as the first step to this end, we pray for the complete abolition of the present system which, at the expense of money, health, and the nation's dignity and honor, has, during the last twenty-three years, received the favor of the State.—*Sei-i-Kwai Medical Journal*, January 24, 1892.

THE PARIS HOSPITAL TREATMENT OF RHEUMATISM.

In a recent article in the *Lancet* it is remarked that in Sir Thomas Watson's palmy days the student of medicine who answered a "green-room" question about the treatment of rheumatism by saying "Six weeks in blankets," and added something about giving drugs to suit the symptoms as they arose, was held to have answered well and wisely. But the introduction of the salicylate of sodium has changed all that.

The efficacy of that drug is well recognized in France also. A recent issue of the *Medical Press and Circular* contains in its Paris correspondence an account of the treatment of rheumatic troubles in the various hospitals in that city. Professor Bouchard employs salicylate of sodium, along with bicarbonate of sodium. Even after the apparent disappearance of the malady he continues for several days the use of those drugs in diminished doses.

Professor Strauss gives the salicylate in acute articular cases. He prescribes it in daily doses of from one to two drachms for men, less for women, in a potion of four ounces containing a little syrup and peppermint. The potion is given in two parts in the evening, at three hours' interval. He does not favor repeated small doses, for they seem to him to be much less prompt in their action. This treatment is continued so long as any fever or pain in the joints persists. After the acute symptoms subside the dose is diminished to twenty grains each evening. This is kept up for five or six days. If profuse sweating is produced, he adds a fiftieth of a grain of atropine. Dr. Strauss teaches that the salicylate is as nearly a specific for rheumatism as quinine is for intermittent fever.

Dr. Dujardin-Beaumetz is a strong partisan of this drug, except where a renal complication or pregnancy modifies the indications. He has had some experience with beta-naphthol in doses of five grains daily. He thinks well of the drug.

Dr. Millard regards salicylate of sodium as the drug *par*

excellence for acute rheumatism. According to his view, it is one of the most valuable conquests of modern therapeutics, one of those results that astonish him most when he looks back on his student days.

Dr. Bucquoy gives two drachms of the same drug daily. No local treatment is considered necessary. The presence of albuminuria is a contra-indication to the use of the salicylate. He then uses quinine, antipyrine, or Dover's powder.

Dr. Barth regards the salicylate with favor, but does not use it in the cases of women who are pregnant, or in persons suffering from cardiac or renal affections.

Dr. Chauffard has noticed annoying cerebral symptoms following the use of salicylate of sodium, but not after that of antipyrine. He has fallen into the habit of using the latter drug, giving from thirty to sixty grains daily. The effects are rapid and not disquieting. Where the diaphoresis is excessive, sulphate of atropine is prescribed.

Dr. Vulpian has lately commended the use of salicylate of lithium. He regards it as more efficacious than the sodium salt in cases of acute and progressive subacute articular rheumatism. It even has some potency in chronic cases when there are painful, swollen, and misshapen joints.—*Editorial New York Medical Journal.*

Book Reviews and Notices.

A Treatise on the Diseases of the Nose and Throat. In two volumes. By Francke Huntington Bosworth, A. M., M. D. Volume two: *Diseases of the Throat.* With three colored plates and 125 wood cuts. New York: William Wood & Co. 1892.

This splendid work is a fit companion to Bosworth's previous volume on the nose. It forms a volume of nearly 850 pages, and may be said to represent all that is received among specialists as worth retaining in that branch of medical literature. Bosworth has long been recognized as one of the leading men in his specialty. His vast experience has brought under his personal notice every conceivable variety of nose and

throat disease, and his good judgment has manifested itself in the way in which he culls from all sources of treatment, and adapts measures to pathological conditions in as nearly a rational manner as possible. Bosworth, furthermore, is capable of doing some thinking on his own account. His originality shows itself wherever the field is doubtful and demands some originality.

The present volume is divided into three main sections: 1, diseases of the fauces; 2, diseases of the larynx; 3, external surgery of the throat.

Bosworth groups several regions under the term fauces. He does not limit the meaning to the space between the pillars, but stretches it so as to make it cover the oro-pharynx, soft palate, uvula, pillars, and the tonsils. As in all systematic treatises, each section opens with a *résumé* of the anatomy and physiology of the organs under consideration. The description of the various diseases of the fauces takes up over 400 pages. It is impossible to give a synopsis of the views enunciated in such a large space; the chapter on syphilis, however, is one worthy of special note, since it is a disease that frequently manifests on the soft palate and posterior wall of the pharynx, and often falls under the notice of the general practitioner. In the absence of other marked symptoms the physician may overlook a serious condition, and allow the disease to continue its ravages until some important organ becomes involved.

The chapter on diphtheria is also one that interests the general practitioner. It is illustrated with cuts, showing O'Dwyer's intubation apparatus, which marks a distinct advance in the treatment of the dread disease, and which every practitioner having a large practice with the disease should know how to apply.

The section on the diseases of the larynx would itself form a complete monograph on the subject. This section is copiously illustrated. The text throughout the work abounds in references to authorities. The list of references contains the names of over 800 authors quoted. This alone indicates the industry of our author and the breadth of his knowledge of the literature of his subject.

The third section treats of the external surgery of the throat. Pharyngotomy, thyrotomy, tracheotomy, extirpation of the larynx and resection of the larynx are described. This part of the specialty overlaps the domain of the general surgeon, but a work like the one before us would hardly be the complete one that it is without a detailed consideration of the subjects named.

No fault can be found with the typographical part of the work. We can not say as much, however, for a number of the illustrations. Some of these are excellent, especially those representing the larynx; but some of the figures showing diseased conditions of the fauces are not fit to be in such good company as the text proves itself to be. But that is only a very small trifle in an admirable work, which, in succeeding editions, which we may bespeak for the work, can be remedied.

A. McS.

State News and Medical Items.

MARRIED—At Shreveport, August 15, 1892, by N. S. Penick, D. D., Miss Julia Guill, of Keatchie, La., to Dr. R. J. Holt, of Ash Point, La.

MARRIED—At Chatawa, Miss., August 3, 1892, at the residence of the bride's brother, Z. H. Dickey, by Rev. M. L. Burton, Dr. C. S. Webb, of McComb, to Miss V. F. Dickey, of Chatawa.

At the last meeting of the Shreveport Medical Society, Dr. Randall Hunt was elected president, and Dr. W. Egan, secretary.

DIED.

DR. P. A. WILHITE, a member of Florida State Board of Health, died recently, aged 71 years.

DR. PETER BRICE, superintendent of the Alabama Hospital for the Insane, died in Birmingham, Ala., August 14, 1892.

EAST—On Wednesday, August 31, 1892, at his residence in East Baton Rouge parish, Dr. Augustus L. East, aged 53 years, 1 month and 23 days.

Dr. R. H. Day, of Baton Rouge, writes as follows of Dr. East:

“ Dr. A. L. East was a regular physician, very highly thought of both by his confreres and the people generally. He joined the Louisiana State Medical Society at our last meeting, and was the father of the young East who died in 1891, while a student in the medical department of Tulane University. Yours very truly, RICHARD H. DAY.”

DR. STANFORD CHAILLÉ is summering in Asheville, N. C.

A JENNER centennial will be celebrated in Washington in 1896.

THE annual receipts of the American Medical Association are \$30,468.

THE prescribed course of medical instruction in the Mexican National University is seven years.

DR. AND MRS. GEORGE K. PRATT and family are spending their holiday in Allegheny Springs, Va.

CHARCOT says: “ Every drop of seminal fluid of a drunkard contains the germ of all the neuropathies.”

THE American Public Health Association will hold its next meeting in the City of Mexico, November 29 to December 2, 1892.

Drs. T. Y. Aby and I. J. Newton, two of Monroe's most popular and able physicians, have associated themselves together for the practice of their profession.

“ DOCTOR,” said the dying editor, “ I have one last favor to ask of you.” “ Name it,” said the doctor. “ I want you to attend the editor of the other paper.”—*Ex.*

THE election of Dr. E. R. Palmer, of Louisville, as president of the American Association of Andrology and Syphilology, was a compliment most worthily bestowed.

DR. GEORGE A. KETCHUM, Dean Medical College of Alabama, has returned from Waukesha, Wis. He was accompanied by his daughter, Mrs. Robert Gage, who has recovered from a severe illness.

A NOTED London chemist has analyzed Keeley's bichloride cure with the following result: Water, 31.61 per cent.; sugar, 6 per cent.; a trace of mineral salts, principally lime, and 27.55 per cent. of strong alcohol.—*Exchange*.

FINIS EWING YOAKUM, A. M., M. D., late of Shreveport, La., has been elected Professor of Materia Medica and Therapeutics in the Gross Medical College of Denver, Col. We wish the doctor success and happiness in his new home.

THE board of administrators of the Louisiana Insane Asylum met last Monday and elected the following officers: Dr. A. Gayden, superintendent; Dr. A. R. Holcomb and Dr. Jesse Lee, assistants, and Mr. Chas. D. Decker, treasurer.

DR. JENKINS, health officer at New York, who has been so much talked about in connection with the cholera, is a Mississippian and hails from Oxford. Dr. Wm. Randle, surgeon of the port of Philadelphia, is from Clay county, Mississippi.

DR. CHARLES E. SAJOUS, editor of the *Annual of the Universal Medical Sciences*, will hereafter take up his residence in Paris, France. His address, until further notice, will be at Drexel, Harjes & Co., 31 Boulevard Haussman. The *Annual* will continue to come out regularly as heretofore.

THE Court of Appeals of Kentucky has recently decided that syphilis, pleaded in answer to an action to recover damages for breach of promise of marriage, is a complete defence, following the decision of the Supreme Court of the State of North Carolina, in which the same defence was interposed and sustained in a similar action.—*Weekly Medical Review*.

COLLEGES in America requiring four or more years of study and four or more terms of lectures as conditions of graduation: Chicago Medical College, Medical School, Northwestern University, Chicago, Ill.; Harvard University Medical School, Boston, Mass.; Boston University of Medicine, Boston, Mass.; Department of Medicine and Surgery, University of Michigan, Ann Arbor, Mich.; Homeopathic Medical College, University of Michigan, Ann Arbor, Mich.; Leonard Medical School, Raleigh, N. C.; Medical University, Faculty of Medicine, Montreal, Que.; University of Toronto, Faculty

of Medicine, Toronto, Ont.; Ecole de Medecine et de Chirurgie, Montreal, Que.; Trinity Medical College, Toronto, Ont.; Laval University, Medical Departments, Quebec and Montreal, Que.; Royal College of Physicians and Surgeons, Kingston, Ont.; Halifax Medical College, Halifax, N. S.; Dalhousie University, Faculty of Medicine, Halifax, N. S.; University of Bishop's College, Faculty of Medicine, Montreal, Que.; Medical Department of Western University, London, Ont.; Woman's Medical College, Toronto, Ont.; Women's Medical College, Kingston, Ont.; Manitoba Medical College, Winnipeg, Man.

THE interesting trial of *Carlile vs. The Carbolic Smoke Ball Company*, which has recently been had in England, appears to establish the liability in that country of a patent medicine company which offers a prize for failure to cure. The defendant company advertised a guarantee of £100 to any one who should be attacked by influenza while using the "carbolic smoke ball." The plaintiff used it according to directions, but suffered, nevertheless, from the epidemic, and in consequence brought suit to recover the guarantee. In spite of the defence, which consisted of technical objections, the suit was won, and the company was obliged to make good its promises.—*Recorder*.

THE British Medical Association passed a resolution at its meeting week before last admitting women doctors to membership. The vote was on a motion to expunge an article in the constitution providing that "no female shall be eligible for election as a member of the association." The mover of the resolution, Dr. Galton, said times had changed in the past twenty years, and where in 1878, when the article was adopted, there were only eight women doctors in Great Britain, there are now 135. He said the battle against women in the medical profession was over, and they should extend the hand of fellowship to the women. The resolution was carried by a large majority. The seconder of the resolution wanted it amended to read in favor of the admission of more women into the profession. There are 130 women students in the London school this year. There are also two schools in Edinburgh, two in Glasgow and one in Dublin.

MORTUARY REPORT OF NEW ORLEANS.

FOR JULY, 1892.

CAUSE.	White	Colored...	Male.....	Female....	Adults ...	Children.	Total
Fever, Yellow							
“ Malarial (unclassified)....	7	3	5	5	5	5	10
“ Intermittent							
“ Remittent	7	4	4	7	6	5	11
“ Congestive	7		5	2	6	1	7
“ Typho	8	2	6	4	7	3	10
“ Typhoid or Enteric.....	2	1		3	2	1	3
“ Puerperal	1			1	1		1
Influenza.....							
Scarlatina							
Measles							
Diphtheria	2		1	1		2	2
Whooping Cough	6		4	2		6	6
Meningitis	10	2	9	3	5	7	12
Pneumonia.....	4	7	7	4	7	4	11
Bronchitis	4	1	2	3	2	3	5
Consumption	45	45	44	46	88	2	90
Cancer	12	3	10	5	15		15
Congestion of Brain.....	11	1	7	5	8	4	12
Bright's Disease (Nephritis) ...	13	10	13	10	23		23
Diarrhœa (Enteritis)	31	19	23	27	13	37	50
Cholera Infantum	21	9	14	16		30	30
Dysentery.....	11	7	10	8	15	3	18
Debility, General	2	4	2	4	5	1	6
“ Senile	10	8	8	10	18		18
“ Infantile.....	2	1	2	1		3	3
All other causes	156	73	122	107	138	91	229
TOTAL	372	200	298	274	364	208	572

Still-born Children—White, 31; colored, 30; total, 61.

Population of City—White, 184,500; colored, 69,500; total, 254,000.

Death Rate per 1000 per annum for month—White, 24.19; colored, 34.53; total, 27.02.

F. W. PARHAM, M. D.,

Chief Sanitary Inspector.

METEOROLOGICAL SUMMARY—JULY.

STATION—NEW ORLEANS.

Date.....	TEMPERATURE.			Precipn. in inches and hundredths..	SUMMARY.
	Mean	Max.	Min.		
1	81	86	76	.01	Mean barometer, 30.12.
2	82	89	75	0	Highest barometer, 30.28, 19th.
3	82	89	74	.12	Lowest barometer, 30.01, 27th.
4	82	89	74	0	Mean temperature, 80.
5	78	84	72	.41	Highest temp., 93, 24th; lowest, 67, 7th.
6	75	80	70	.42	Greatest daily range of temperature, 17, 13th.
7	76	84	67	1.82	Least daily range of temperature, 5, 26th.
8	74	77	71	.28	MEAN TEMPERATURE FOR THIS MONTH IN—
9	76	80	72	1.00	1871..... 84.0 | 1877..... 83.0 | 1883..... 84.0 | 1889..... 83.0
10	75	78	72	.93	1872..... 82.0 | 1878..... 84.0 | 1884..... 85.0 | 1890..... 82.0
11	76	80	73	.22	1873..... 82.0 | 1879..... 83.0 | 1885..... 83.0 | 1891..... 81.0
12	80	87	73	.01	1874..... 81.0 | 1880..... 81.0 | 1886..... 80.0 | 1892..... 80.0
13	82	91	74	0	1875..... 82.0 | 1881..... 84.0 | 1887..... 80.0 |
14	83	90	76	0	1876..... 83.0 | 1882..... 80.0 | 1888..... 82.0 |
15	80	88	72	.12	Total deficiency in temp'ture during month, 76.
16	80	84	76	.03	Total deficiency in temp'ture since Jan. 1, 380.
17	80	86	73	T	Prevailing direction of wind, S. W.
18	82	89	75	.11	Total movement of wind, 4796 miles.
19	82	90	74	0	*Maximum velocity of wind, direction and date,
20	82	90	75	0	24 miles, from N. W., 6th
21	80	87	73	.96	Total precipitation, 7.46 inches.
22	82	89	76	0	Number of days on which .01 inch or more of
23	84	91	76	0	precipitation fell, 18.
24	85	93	77	0	TOTAL PRECIPITATION (IN INCHES AND HUNDREDTHS)
25	80	86	73	.43	FOR THIS MONTH IN—
26	76	78	73	.35	1871..... 4.34 | 1877..... 6.41 | 1883..... 3.33 | 1889..... 9.13
27	79	86	72	.10	1872..... 6.43 | 1878..... 6.21 | 1884..... 4.12 | 1890..... 6.59
28	82	90	74	.14	1873..... 5.22 | 1879..... 7.04 | 1885..... 6.15 | 1891..... 4.57
29	83	91	75	0	1874..... 12.93 | 1880..... 11.22 | 1886..... 4.35 | 1892..... 7.46
30	83	89	77	T	1875..... 6.57 | 1881..... 6.97 | 1887..... 7.85 |
31	82	89	76	0	1876..... 4.73 | 1882..... 6.84 | 1888..... 2.02 |
					Total excess in precipitation during month, 1.04.
					Total deficiency in precip'n since Jan. 1, 4.72.
					Number of cloudless days, 9; partly cloudy
					days, 12; cloudy days, 10.
					Dates of frost, —.
					Mean maximum temperature, 86.
					Mean minimum temperature, 74.

NOTE.—Barometer reduced to sea level. The T indicates trace of precipitation.
To be taken from any five-minute record.

G. E. HUNT, *Local Forecast Official.*

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

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Original Articles.

[No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a written order for the same accompany the paper.]

REMITTENT FEVER.

By ARTHUR C. BLAIN, B. C. S., M. D., MACON, GA.

Remittent fever may be defined as a miasmatic paroxysmal fever, characterized by exacerbations and remissions.

Among the various synonyms are, bilious fever, bilious remittent, endemic fever, marsh miasm, gastric malarious remittent, jungle fever, and continued fever.

Before entering upon the description of this troublesome fever, it will be necessary for me to trespass upon your time by referring briefly to the poison producing the disease.

Malarial Fevers.—This name is given to a group, of which the poison is a protozoon, and is regularly produced without the human body. It is produced, lives and grows in the earth, and is then (we know not how) communicated to human beings, and is not transmitted from one patient to another.

They are disorders characterized by a febrile movement, hence the name. Yet we find that the same poison produces malarial cachexia where there is no fever, but disturbances of digestion, blood, nutrition, etc.

These diseases vary much in severity, from simple to some of the most fatal fevers.

As to its distribution, we may say that malaria is universal. Wherever man is there will some of its forms appear, and it has been our luck, in this section of the country, to get that form which is calculated to try the patience of the physician more than any other of the malarial manifestations, although, fortunately for us, its tendency is toward recovery.

It is especially prevalent in the torrid and temperate zones; cold countries are less troubled by it. The most severe cases are seen in the tropical countries of Panama, India, Africa, etc. Here we find the continued or remittent fever. Right here I wish to point out the error (that too many of us make) of using the synonym continued fever for this disease, as it is both confusing and faulty, and in doing so I think it will be only necessary to quote the definition of simple continued fever given by Dr. J. C. Wilson. He says: "It is a continued fever, not due to specific cause, usually of short duration (24 hours to 10 days), lacking the distinguishing characteristic of the other fevers, rarely fatal in temperate climates, and showing when death occurs no characteristic lesion."

In this State we find the remittent form most frequently. I, for one, seldom see a case of the intermittent type.

In temperate climates we can separate according to type of disease; in some localities we have pretty severe forms, but not so extreme as in the tropics. In the South and West there are places where malaria causes a number of deaths. In these localities we find that the disease does not remain continually; some years it is severe, again it almost disappears, and sometimes we find none at all. It may appear in a new locality at any time.

In the Middle and Eastern States, where it is less severe, this capacity for coming and going is developed to a marked degree; it may prevail for years and disappear without any noticeable change in soil or other surroundings, and after a few years it may reappear as suddenly as it left.

As regards the influence of soil and topography of country, I may say that in the tropics we find that prevalence diminishes with the elevation above the level of the sea, increases near marshes and stagnant water, especially if marshes or

ponds have recently been drained. Also when soil is cultivated for the first time, or where a field has been left idle for some time and then taken in again. In temperate climates these rules are of no importance whatever, and the milder the type the less will it conform to these rules. It will come in high or low districts, sandy, rocky, or marshy soil.

To a certain extent its appearance is dependent on seasons. In the tropics it is especially prevalent during the rainy season. In temperate climates the rule is that it is most frequently seen in summer and autumn, but my experience has been that in this locality it is more often met with in autumn and early winter. The poison of the disease is produced in the soil and is independent of human beings. Favorable conditions for growth are heat and moisture.

The negro race is less susceptible than the white. Some persons seem to enjoy an immunity from the disease, while others are seized after very slight exposure.

In uncomplicated cases it is a rare thing for malaria to produce death, and consequently the opportunities for a correct study of the lesions are rare. You sometimes find discolorations in some parts of the body, usually in the liver and spleen, also less frequently in the brain. It was formerly supposed that these changes were due to deposits of pigment in the tissues, but this is erroneous.

In 1881, Laveran, a physician in Algiers, in studying the blood, found regular changes, besides the particles of pigment. Again in 1885 observers in Italy found the same changes constantly in the blood of these patients, and the same has been verified by observers in this country. These changes are due to the presence in the blood of protozoa, which seem to belong to the animal kingdom. It makes its way into the red blood cell, and is crescentic in form. Sometimes it is pale and transparent, at others deeply pigmented. Again we find larger crescentic bodies, too large to be contained in the red corpuscles; so these float freely in the plasma of the blood, and in these we constantly find pigment. Again, we find flagellate bodies in the blood, whose tails are in constant motion. So these protozoa produce the characteristic lesion of the disease, and the severer the case the more of these we find in the

blood. These can be found in large numbers in the blood drawn during the febrile attack.

Quinine is a poison to these forms of life, and here we have the reason why this drug is recognized as a specific in malaria.

We have increase in the size of the spleen, and it is less firm in consistence. The period of incubation is longer in this than any known disease except hydrophobia. It may vary from a week or ten days to several months; the length of this period seems to depend upon exposure. climate, etc., is shorter in hot than cold countries. A patient may carry the poison in his body for years, yet only at certain times does it recur, may be year after year.

The invasion of the remittent form may be in one of three ways.

1. There may be several intermittent paroxysms, then a change to the remittent form.

2. A prodromic period of a few days, lassitude, furred tongue, and there seems to be some deficiency of biliary matter in the stools.

3. In this class the onset of the disease is sudden. In the latter case we are apt to have a chill or else shiverings, then the temperature begins to rise, and soon reaches 103 deg. F. to 104 deg. F. Face flushed, eyes suffused, intense headache and pain in back and limbs, pulse full and rapid, tongue coated, and perhaps nausea and vomiting. Fever lasts during all of the twenty-four hours, but not at the same height, usually remits in the early morning. May have two remissions, morning and evening. This variation in the thermometer readings seems to indicate to a certain extent the severity of the case, the higher the temperature during the remission the severer the case.

As a rule the bowels are constipated, but you may have large watery discharges. The urine is diminished in quantity, high colored and high specific gravity. There is an increase in the amount of urea. There is, as a rule, no complicating nephritis.

In the early stages of remittent fever the tongue may be moist and large, covered with a white or grayish or yellowish

coat. The edges may be indented with the imprints of the teeth—Osborne's malarial tongue. Later it may become dry, brown and cracked, and difficult of protrusion, but seldom shows the tremulousness of the typhoid tongue.

As the disease advances the temperature becomes higher and remissions slighter. Nausea and vomiting are the most constant and annoying symptoms in many cases.

Some cases are ushered in by severe diarrhœa, and in children we frequently have convulsions.

All the excretions are tinged with bile. Epistaxis in remittent fever is a very common symptom, and we sometimes have hemorrhage from the mucous membranes, but you seldom see general disposition to bleeding.

Enlargement of the spleen to some extent is constantly present, and to determine this a correct knowledge of the position of a normal spleen is necessary. The normal spleen is situated on the left side opposite the ninth, tenth and eleventh ribs, its posterior border is one inch to the left of the vertebral column, and its anterior border reaches to the axillary line.

Jaundice is frequently present to a certain degree, but completely developed jaundice is rare. For a better clinical understanding we will consider three types of the disease.

1. *Mild Cases*—The temperature is not very high, not over 100 deg. F., and these are not very sick, but are in bed and complain of headache, prostration, anorexia, etc. We are not anxious about these cases.

2. *Severe Cases*—Temperature 104 to 107, or even 108 deg. F. Remissions not very marked, and in the second week they look more and more like typhoid patients—emaciation, tongue and lips are dry and brown, teeth coated with sordes, alternating delirium and stupor, though the delirium shows less perversion of the reasoning faculties than in typhoid cases, and after we arouse them we are enabled to get intelligent answers from our patients. There seems to be considerable loss of memory. They may have retention of urine and involuntary evacuations from the bowels.

They lie listless on their backs and look like patients in the second and third weeks of typhoid fever. To these cases the name *typho-malarial fever* has been given. The name "typho-

malarial'' was introduced into medical nomenclature by Surgeon J. J. Woodward, U. S. A., who presented a paper to the International Medical Congress at Philadelphia in 1876. The following is an extract from the proceedings which will show the interpretation of the term. On motion of Dr. Woodward, seconded by Dr. Pepper, the following was adopted, as expressing the opinion of the section: "Typho-malarial fever is not a specific or distinct type of disease, but the term may be conveniently applied to the compound influence of malarious fevers and of typhoid fever." Hence, the term can properly be applied to only such cases where we find both diseases existing simultaneously in the same subject.

3. *Malignant Cases*—In these you find your patients rapidly overwhelmed by the disease. Cerebral symptoms come early and are well marked; there is a disposition to bleed from the mouth, nose, stomach or intestines. There may also be petechial extravasations beneath the skin. Disposition to jaundice often well marked. These are very fatal cases and need to be differentiated from yellow fever.

The cause of the disease is undoubtedly the specific germ, but certain conditions are necessary, viz., suitable soil or pabulum, suitable moisture, suitable temperature and sufficient time for its growth and development. The poison possesses ponderability and the atmosphere is undoubtedly the medium through which it is disseminated, although as yet we are not prepared to say just how it is taken into the system. Liability to the disease is in indirect ratio to the proximity to the hotbed of malaria, as we may term it. Continous currents of air passing in the direction for some time over the breeding places of malaria are usually followed by an outbreak of the disease.

It is a popular idea that milk often carries the poison when left in open pans over night, also the muscadine grape, which grows in low places and has a rough skin, is thought to carry the disease, and I believe the charge against this fruit, either as regards the fruit itself or the exposure during the search for it, as I have seen several cases where I thought the fever was contracted in this way. The duration of the disease is indefinite—it goes on from five days to three or four weeks or more. Many recover promptly, but some after following this

type for several weeks change to the intermittent, and ultimately recover. Death seldom occurs earlier than the eighth day. During the convalescence, many patients are troubled with pains in their limbs, which seem to respond to anti-rheumatic remedies better than to any others.

Diagnosis.—The mildest cases of this type of fever closely simulate the intermittent, as the temperature curve is marked by sharp angles and long tracings. But in these cases we care very little about the variety, for the treatment should be the same.

There can be no doubt that typhoid and the adynamic forms of the remittent fever are often confounded, but when the eruption appears in the former, the doubt is removed. In remittent the skin is frequently jaundiced; not so in enteric. Abdominal tenderness, except in epigastric and hepatic regions, usually absent in the former, present in the latter. We also have iliac gurgling. In remittent fever the stools are usually dark colored and bilious, with constipation as a rule. In typhoid we usually have diarrhœa and pea-soup passages or brownish yellow with mucous flocculi. If hemorrhagic tendency appears in the course of remittent it is usually from the mouth, nose, stomach or urinary tract, but seldom from the intestines, while in typhoid it is the rule to have it from this latter source. Then we may be guided by the temperature chart. Lastly a careful examination into the history will assist you in your diagnosis.

The malignant cases of remittent may be confounded with yellow fever, but with careful attention to the following points, I think a diagnosis may be arrived at; although I believe that in many cases the proper treatment for one would cure the other. Yellow fever is continuous, albuminous urine is the rule, spleen not so much affected, hemorrhage from the stomach, and other viscera, the rule in yellow fever, black vomit. Death is common on the third day, and in most malignant cases of remittent it seldom occurs before the seventh or eighth day. Convalescence rapid after yellow fever, slow after malaria.

The facial expression in remittent is somewhat characteristic—during pyrexia the face is flushed and eyes injected, but

redness more marked and expression more animated than in either yellow or enteric fever. The natural facial expression is better preserved than in either of the other forms of fever.

Death from an uncomplicated case of remittent fever should be a rare occurrence when properly managed; even in the worst cases where you see your patient early in the disease the prognosis is favorable.

I shall devote a few lines to prophylaxis. In persons exposed to the malarial miasm it is a good plan to give daily doses of quinine (5 to 10 grains) each morning, and for them to avoid night exposure. Should you see a patient in the prodromic stage of lassitude, furred tongue, foul breath, etc., I believe you could often prevent an attack of remittent fever by giving a mercurial cathartic, followed by quinine and a mineral acid.

Actual Treatment.—The patient should be put to bed in a well ventilated room. They require good nursing. Regulate diet—a fluid diet is necessary, and milk is the best to rely upon. You may have to boil milk and give it iced, or you may peptonize it when necessary. You can give the juice pressed directly from rare beef or give chicken broth, beef tea, etc. I believe it best to give all nourishment in small quantities and at frequent intervals.

Drugs.—Should you see patients where the disease is ushered in by severe chill (which is seldom the case), you may abort the paroxysm by hypodermic injections of morphine, alone or combined with pilocarpine (one-tenth or one-fifth of a grain), or you may use mustard and hot water as an emetic or give chloroform. Large doses of antipyrine have been suggested to cut short the chill, but as yet I have never had occasion to try it.

The natural tendency is to give the same drugs as in intermittents (quinine, arsenic, Warburg's tincture, etc.) and in many cases they do good, hence when called I think it good treatment to give them a trial, but if after a reasonable time you see that you do no good do not push them further. Give quinine in large doses, 20, 40, 60 or 100 grains in the twenty-four hours, and you will often be rewarded by seeing a dry tongue become moist, skin bathed in perspiration, delirium

cease and patient sink into a quiet sleep. In these large doses it is best to use powders or solutions.

If after a week you do no good stop your quinine and use only a sustaining treatment for a week or so, and then exhibit the drug again and you will often now be successful, for there is a marked difference as to the time when the drug will do good. The same may be said of Warburg's tincture. I can not leave this drug without referring to the proper mode of administering it in severe cases. It is best given on an empty stomach, say in the early morning give from two to four drachms, then do not give any food for three hours, then repeat the dose. For milder cases one drachm three times a day will be sufficient.

In these cases while you are using the sustaining treatment, I think it a good plan to prescribe arsenic in the form of Fowler's solution five to ten minims three times a day.

Venesection is used in some cases, but I doubt its efficiency, as we have no inflammation to combat. If they pass to the typhoid state, the heart may need supporting; stimulate by whiskey or brandy, and you may combine with digitalis, caffeine, nux vomica, strophanthus or convallaria. If the vomiting is severe you may control it by cracked ice, champagne, opium, chloroform, spice plaster to the epigastrium, or, as I prefer, oxalate of cerium and bicarbonate of soda.

In excessive temperature we have many useful drugs at our command with which to combat it, though I only wish for or expect to reduce the temperature two or three degrees, so as to make the patient more comfortable. For this a prescription containing tr. aconite, vin. ipecac, and spts. æth. nit. is often useful. When this does not answer, I rely upon phenacetine as the best drug at our command, in doses of 5 to 10 grains, as the case may demand, repeated often enough to keep the patient at a comfortable temperature. Sponge baths in tepid water will be found very grateful to the patient, and valuable in controlling temperature. It is my practice in all cases when called early to give a cathartic, and I prefer a prescription containing quinine, blue mass, rhubarb and podophyllin, and in many cases following this you will find that the temperature will subside and you can control by quinine. In the use of

quinine in severe cases it is not necessary to wait for the remission, but get them under the influence of the drug as soon as possible. In milder cases it is best to exhibit the antipyretic during the period of remission.

The use of bitartrate of potassium as a depurative drink will be found very agreeable to your patient.

Convalescence is quite slow and often accompanied by pain in the limbs, which can be controlled by phenacetine and salol. Convalescence will be greatly assisted by a tonic of nuxvomica combined with nitro-muriatic acid and some one of the bitters. At this period the appetite is often voracious and must be controlled.

Before closing, I wish to call your attention to the measures used in a few cases which have given me very gratifying results.

CASE I.—On October 15, 1888, S. X. called at my office, showing symptoms of malaria, with slight fever, which he stated had been intermittent for a week or more. I gave a mercurial cathartic, and the following day I called to see him, found fever quite high, and it did not go off for sixteen days. He had a marked case of remittent type. In this case the quinine affected the head, increased headache, etc., so I gave antipyrine, which had no other effect than to produce a rash over the anterior surface of the body. I resorted to the use of Warburg's tincture in the manner set forth above, and I believe it shortened the attack.

CASE II.—In July, 1889, I was called to see a child 6 years old. I found her suffering from remittent fever; she had been sick for about two weeks. After using the ordinary method for about ten days, I found the patient rapidly growing worse and vital force failing. I told the family that I could give them no hopes as to her recovery; so I thought, as she was going to die anyway, I could do no harm by giving a cinchona alkaloid freely, so ordered twenty grain doses of sulph. cinchonidia every three hours. After taking the third dose the fever left and the child made a good recovery.

CASE III.—On October 30, 1888, I was called in the country to see a patient who had remittent fever. My usual method of treatment was continued. In this case the nausea

was especially marked with occasional vomiting; patient growing worse. On November 10, Dr. H. Buford saw the case with me, and as nausea was so troublesome, we decided to have it over, so we gave an emetic of twenty grains of ipecac and warm water, which effectually put a stop to the nausea and soon after the fever cooled and recovery was uninterrupted.

I will only trespass upon your time to record one more case, which is interesting to me from the fact that it was the first case in which I gave phenacetine a thorough test, and I have never regretted it.

CASE IV.—Patient W., male, aged 20 years. On January 2, 1890, I was called in; patient stated that he had been having some fever each day for about a week; gave usual cathartic and aconite and nitre mixture, which had no effect. Evening temperature usually stood at 105 degrees F., and morning about 102 degrees F. Once during the progress of the case the evening temperature was 108 degrees F. In this case whenever the temperature rose I gave a six-grain capsule of phenacetine and brought the temperature down to normal. Patient grew very weak and it was necessary to stimulate heart, so I added digitalis and tr. nux vomica to his whiskey, which was given every second hour day and night.

The nourishment used was milk, kumyss and beef tea. Quinine, Warburg's tincture, etc., were tried and had no effect, so they were stopped, and only the supporting treatment used, keeping at a comfortable temperature by phenacetine and sponge baths. The fever ran for twenty-seven or twenty-eight days, when at 1 A. M. I ordered eight gr. doses of phenacetine, repeated every second hour. After the third dose the patient's fever left for the first time, and his temperature fell below normal and he had a very severe chill. I gave whiskey freely with digitalis, put hot bottles around patient and administered twenty gr. of quinine.

This patient was soon able to be out, but exerted himself too much, and had fever again for a few days; this was easily controlled. He was troubled a good deal with pains in the limbs, which were relieved by phenacetine and salol.

REPORT OF MILK ANALYSES TO THE STATE BOARD OF
HEALTH OF LOUISIANA.

By A. L. METZ, CHEMIST OF CITY OF NEW ORLEANS AND BOARD OF HEALTH.

Since the last meeting of the Board of Health a controversy has arisen between the Dairymen's Mutual Benefit Association and the local sanitary department of this board upon the milk question of this city. On account of the nature of the controversy I defined my position upon the question through the columns of the *Times-Democrat* July 19, 1892. However, I deem it my duty to lay before this honorable body this report upon the milk supply and milk inspection of this city (the results of my personal investigation), with such other facts and statements as are necessary for an intelligent understanding. In order to do this it will be necessary briefly to review the history of milk inspection in this city.

The first crusade against adulterated milk in this city was made during the term of Dr. Watkins as chief sanitary inspector of the Board of Health in 1887.

The instruments that were then adopted were employed almost exclusively up to March 15, 1891 (when the chemical laboratory of the city and Board of Health was established), and were respectively as follows:

The pioscope.

The lactoscope.

The lactometer.

The pioscope, an arbitrary and unreliable instrument, is a color test, and was placed in the hands of the sanitary officers. If the milk tested recorded "normal," it was all right, and the dairymen allowed to drive away; if, however, it recorded not normal, a sample of milk was taken and brought to the office of the chief sanitary inspector, or his assistant, for further examination with the instruments above named (*i. e.*, lactometer and lactoscope).

The lactometer is an instrument employed to ascertain the specific gravity of the milk. Lactometers vary in their graduation; for instance, there is a lactometer, the stem of which is

graduated from 0 deg. to 40 deg., 0 deg. representing pure water, 40 deg. representing a specific gravity 1.040. If this instrument stands over 33 deg. in the milk, it is said to be skimmed; if it falls below 29 deg., the milk is reported "watered."

The lactometer employed by the Board of Health of New York is a delicate hydrometer, which indicates specific gravity at a temperature of 60 deg. Fahr., between 1.0000 (the specific gravity of water) and 1.0348. On the scale the specific gravity of water is indicated by 0 deg., the specific gravity of 1.0348 by 120 deg, the space between 0 deg. and 120 deg. being divided into 120 parts. The 100 deg. mark indicates a sp. gr. 1.0290. If, therefore, a given sample of milk stands below 100 deg. on the lactometer at 60 deg. Fahr., the sample has been adulterated by the addition of water. The space between 0 deg. and 100 deg. being divided into 100 equal parts, each part indicates 1 per cent. If, therefore, the milk tested has a specific gravity indicated by 90 deg., for example, if the lactometer floats at 90 deg., it is safe to assume that at least 10 per cent. of water has been added.

Then there are other lactometers, having a specific gravity of 1.030 for their standard. All of these lactometers, no matter what gravity is accepted as the standard, have one disadvantage which can not be overcome, *i. e.*, that if the milk contains an unusual amount of cream, the instrument will record added water invariably; if the cream is removed it will invariably record the sample "normal;" but barring these important defects, lactometers only approximately record the amount of water added.

The lactoscope (Fesers) is an instrument which determines by the capacity of the sample the amount of butter fat contained in the same. In the instrument employed for this purpose a given amount of milk is placed and water is added until the markings in the instrument can be seen. The amount of water added before the marks are seen corresponds to a certain percentage of fat graduated upon the instrument, and in different hands will give different results, as the readings depend principally upon the eyesight of the operator.

It is an instrument that gives approximate results only.

These facts have been verified by experiment, the differences in several instances being as high as 1 per cent.

For these reasons the sanitary inspectors would not make an affidavit against milk that registered above 88 degrees on the lactometer, and many a case of adulterated milk was allowed to go unpunished. On several occasions samples of milk sent to the laboratory for examination (the samples having been previously examined with the instruments described above), chemical analysis revealed the fact that 25 per cent. of the lactometer and lactoscope readings were reversed.

Such was the condition of affairs until the present able and efficient chief sanitary inspector, Dr. F. W. Parham, took hold of the office. His excellent judgment soon perceived that the methods employed for milk inspection were arbitrary, and, after due consultation with me, Dr. Parham decided to invest me with the full responsibility of examining milk.

This occurred a few days prior to April 20, 1892. On this day the first general run of milk was made, a sample of milk was taken from every dairy wagon that hove in sight, and the samples were subjected to complete analysis. Of the samples analyzed 63.04 per cent. contained less than 12 per cent., and more than 8 per cent. of total solids; 39.96 per cent. contained more than 12.8 per cent. total solids. The average amount of adulteration being 20 per cent. of added water, the lowest being 7.5 per cent., the highest 38.5 per cent.

On July 1, 1892, the last run of milk was made. Of the samples analyzed 23.33 per cent. contained less than 12.45 per cent. and more than 11.8 per cent. of total solids; 76.66 per cent. contained more than 12.8 per cent. of total solids, the average amount of adulteration being 7.5 per cent. of added water, and the lowest being 4.25 per cent., the highest 9.25 per cent.

This shows an improvement in the milk supply of this city in less than three months of 40.3 per cent.; and a corresponding decrease in the amount of adulteration during the same time from 20 per cent. to 7.5 per cent.

As far back as April 8, 1891, Dr. H. W. Blanc and myself conducted experiments and analysis for fixing a standard

for milk. Some of the results of these experiments are appended hereto:

Analysis of milk from single cows of different breeds, taken from the dairy of Mr. John Mahner by Dr. H. W. Blanc, Chief Sanitary Inspector B. of H.

Breed.	Animal Calved.	Specific Gravity.	Butter Fat.	Solids not fat	Total Solids.	Water.	Condition.
Holstein	6 mos. ago.	1.032	4.5	9.37	13.87	86.13	Very poor.
Jersey.....	2 weeks ago.	1.027	3.75	9.15	12.90	87.10	
Jersey.....	2 weeks ago.	1.030	4.58	9.92	14.50	85.50	
Jersey.....	2 mos. ago.	1.029	3.79	11.11	14.90	85.10	
Creole	3 mos. ago.	1.030	4.	9.50	13.50	86.50	
Durham ...	5 mos. ago.	1.034	4.10	11.78	15.88	84.12	
Average		1.030+	4.12	10.14	14.256	85.74+	

Analysis of the mixed milk.

Specific gravity.....	1.030
Butter fat.....	4.10
Solids not fat.....	10.14
Total solids	14.24
Water.....	85.76

The mixed milk from herds of cows was frequently taken and analyzed and in no instance did an analysis show total solids below 13 per cent., and for this reason we concluded to adopt a maximum of 87 per cent. water and a minimum of 13 per cent. of total solids as the standard.

Quite recently we had another opportunity to analyze the whole mixed milk from a herd of twenty-one cows—dairy owned and operated by August Doecker—with the following results:

Specific Gravity.	Butter Fat.	Solids not Fat.	Total Solids	Water	Ash.	Remarks.
1.031	4.	9.	13.	87.	0.7	Food: A mixture of brewers' grains, bran and cotton seed hulls.
1.0299	3.6	9.92	13.52	86.48		Analysis of milk from the poorest cow in the stable.

The question of adopting a standard and giving it legal enactment came up for discussion between Mr. B. B. Howard, then acting attorney for the Board of Health, Dr. Parham and myself. Mr. Howard advised us by all means to obtain an ordinance fixing the standard for milk. In a report to this

board June 2, 1892, I recommended that a standard for milk be adopted, giving at the time my reasons for the request, and upholding the same by presenting a number of analyses of pure milk from dairies situated about New Orleans. This report was accepted and referred to the laboratory committee of this board, of which committee Dr. F. Formento is chairman. After carefully studying my report and other literature on the subject Dr. Formento concluded to approve my report, which he did in a recommendation to this honorable body, offering at the same time a resolution, in which he suggested that Col. F. C. Zacharie, attorney for the board, be requested to draw up the necessary ordinance, and the same to be submitted to the City Council for action. This resolution was unanimously adopted by your body, and the ordinance was sent to the council for action. This ordinance was referred to the proper committee of the council, which reported favorably upon it, but when it came up for second reading was upon motion re-committed.

At the next meeting of the health committee Mr. P. L. Fourchy, attorney for the Dairymen's Mutual Benevolent Association, entered the following protest:

To the Honorable the Mayor and Members of the City Council of New Orleans:

GENTLEMEN—This the petition of the Dairymen's Mutual Benevolent Association of New Orleans with respect shows:

That there is an ordinance coming up for action to-night before you, on behalf of the Board of Health, to compel the milkmen to furnish milk on demand to the sanitary inspectors, etc.

Now this association enters this its formal protest to same—

1. Because it is in violation of the rights of the milkmen, or any other citizen, to sell or dispose of his milk (or property) as he may deem fit and proper.

2. Because the Legislature of this State, by Act 82 of 1882, page 133, approved July 5, 1882, section 6, has already provided for the mode and manner of furnishing milk, etc., and the city, which is the creature of said Legislature of 1882, by Act No. 26, page 14, is powerless to legislate again on such matter, the State being sovereign, and having already exercised its prerogative.

3. Because it is unfair, unjust and in violation of law and the Constitution of this State to compel a party to furnish evidence criminating himself.

4. That such an ordinance should at least be so framed and amended as to compel the inspectors to have and carry with them the necessary instruments to weigh the milk as they formerly did, and this in the presence of the milkman, and in common justice to all.

5. That the penalty for selling adulterated milk should be changed from a fine or imprisonment to the mere confiscation of the entire contents of the cans containing adulterated milk, which, no doubt, would be a sufficient penalty and save unnecessary costs and expenses incident to criminal prosecution; and only in case said milkman refuses to allow the confiscation of said milk, a fine from \$1 to \$25, or in default thereof, imprisonment for not more than thirty days, should be imposed.

The premises considered, your petitioner prays that said ordinance be rejected in toto, or, if passed by the council, that same be vetoed by the honorable the mayor, as being unjust and oppressive and in violation of law and the Constitution of this State, and the petitioner will ever pray as in duty bound for general relief. Very respectfully,

J. P. PUISSEGUR, *President.*

P. L. FOURCHY, *Attorney.*

New Orleans, June 28, 1892.

Mr. Fourchy also spoke of the great hardships to which the dairymen were subjected by us, and cited a case where a sample of milk stood three weeks before it was analyzed, and then an affidavit made against the dairyman. This statement was made evidently without investigation as to its truth and reliability.

Upon invitation Dr. Parham, Mr. Mills and myself, in company with Mr. B. B. Howard, attended the meeting of the Health Committee of the City Council July 8, 1892.

Dr. Parham and I were requested to take the stand. This we did, giving a minute, detailed description and explanation of the methods of analysis which were formerly employed and those employed to-day. I called attention to analysis by which the present proposed standard for milk was obtained. For the consideration of the committee I presented numerous analyses made by myself upon milk obtained from cows under different conditions, and cited the analysis and statements of

numerous authorities to show that the milk standard which we proposed was a just standard, and that most States which have legislated upon the subject have adopted the same standard as proposed by the ordinance.

A committee from the Dairymen's Association was present, but was not prepared to say positively whether the standard proposed was fair. They all doubted it—in other words, they objected to the standard on general principles.

The Health Committee, desirous of acting impartially, offered through Mr. Lorsch the following resolution:

Resolved, That a committee from the Dairymen's Association and Prof. Metz meet and make a joint examination of milk, the same to represent the whole mixed milk from the whole herd, the analyses to be made at the Board of Health and City Laboratory, in the presence of such chemists as the dairymen may select.

This resolution was accepted by both sides, and the substance of the resolution was carried out to the letter, as the following will clearly show:

An arrangement was perfected between Mr. P. L. Fourchy, attorney for the Dairymen's Association, and myself, by which we agreed that the mixed milk from four dairies was to be tested; two dairies to be selected by each party.

The dairies to be selected by Mr. Fourchy were those of Messrs. Puissegur and Pichelon, while those of Messrs. F. M. Williams and R. L. Chilton were selected by us.

On Wednesday, July 13, 1892, a party composed of Messrs. Fourchy, Storck and Ludwig for the dairymen, and Dr. A. S. Wheeler, Messrs. Will, Gray, Farendon and myself for the board, and Mr. Pohlman, a member of the Health Committee of the Council, as a disinterested party, drove to the dairy of Mr. R. L. Chilton, corner Baronne and Napoleon avenue. This dairy has fifteen milch cows, seven of which are Western or Kentucky cows, all graded Jersey, two Holstein, and the rest are Creole cows. All of these cows were in the possession of Mr. R. L. Chilton for thirty days. The dairy was in good condition. The feed in this dairy varies with the grade of cows, and consisted as follows:

Creole cows, fifty pounds cotton seed hulls and two gallons of yellow meal per day for nine milch and five dry cows.

Kentucky cows, two gallons corn meal and bran and one pint yellow meal, but no cotton seed hulls.

These cattle are driven out for exercise, do not graze, but receive two sacks of green grass per day.

A sample of the mixed milk was taken, properly labeled and corked.

We then drove to the dairy of Mr. F. M. Williams, corner St. Charles and Adams streets. This dairy has sixteen cows, of which fourteen are milked. The quality of the cows run thus: One seven-eighth Jersey, one three-quarter Jersey, two graded Jerseys, two Holsteins, two graded Holsteins, eight Mississippi or Creole cows.

The feed given these cows each day is as follows:

Cotton seed hulls, 250 pounds. Mixed feed—153¾ pounds wheat bran, cow feed or corn meal, cotton seed meal.

This herd is driven out for exercise each day and allowed to pasture one block from the premises.

This dairy is in every respect a model dairy from a sanitary standpoint. A sample of the mixed milk was taken in a new bottle, securely corked and labeled. The samples were taken to the laboratory and analyzed in the presence of the chemists selected by Mr. Fourchy and Mr. Fourchy himself. The results of these analyses I shall call your attention to presently.

On Friday, July 15, 1892, the same party (with the exception of Dr. Wheeler and Mr. Pohlman) rode to the dairy of Mr. J. P. Puissegur on Metairie Ridge. Mr. Puissegur stated that he owned all the cows and that they were in his possession for over thirty days. The cows in the dairy numbered twenty-four, of which nineteen were milked in our presence. All the cows (but one, a Jersey) are Creole.

The feed in this dairy is as follows: 1 pound cotton seed meal and 2½ gallons brewer's grains for each cow.

The feeding of cattle with brewer's grains is strictly prohibited by law in many States. The following law (is about

the same in all States that have legislated upon the subject) is taken from the State law of Minnesota: Chapter 247, general laws of 1889, section 12: "In all prosecutions under this act relating to the sale and manufacture of unclean, impure, unhealthy, adulterated or unwholesome milk, if the milk be shown to contain more than eighty-seven (87) per centum of water fluids or less than thirteen (13) per centum milk solids, of which less than three and one-half ($3\frac{1}{2}$) per cent shall be fat, shall be declared to be adulterated, and milk drawn from cows fifteen (15) days before and four (4) days after parturition, or from animals fed on distillery waste or brewer's malt, or any unhealthy food whatever, shall be deemed for the purpose of this act to be unclean, impure, unhealthy and unwholesome milk." Hassall (page 404), Food (Ed. 1876), says that "Brewer's and distiller's grains stimulated the animals unnaturally, and under the stimulus large quantities of milk of inferior quality are secreted, the cow quickly becoming worn out and diseased in consequence." In reference to the effect of grains on cows Mr. Harley (same book and page) makes the following remarks: "Brewer's and distiller's grains and distillery wash make the cattle grain sick, as it is termed, and proves injurious to the stomach of the animal." "It has been ascertained that when cows are fed upon these grains, etc., their constitutions become quickly destroyed."

It is my opinion that the ill effects of brewer's grains, etc., are produced by decomposition products, and that the ill effects of brewer's grains can be remedied by drying the grains, as is done by the Anheuser-Busch Brewing Company of St. Louis, and preventing decomposition.

The cows of Mr. Puissegur's dairy have no pasturage, but all the green grass they can eat. A sample of the mixed milk was taken, corked and labeled.

We were (by arrangement) to go to the dairy of Mr. M. Pichelou, but were informed that he had commenced milking and went to the dairy of Mr. A. Duchien, directly back of Puissegur's.

The milkings of eight Creole cows were taken. These cows were in the dairy thirty days and belonged to Mr. Du-

chien. The amount of food fed to these cows seems incredible but it was *positively* asserted that each cow receives six (6) gallons of cotton seed meal, with a sprinkling of cotton seed hulls (although I believe the opposite to be nearer the truth), and two racks of green grass per day. Milk was taken as in the previous cases, brought to the laboratory and analyzed in the presence of the gentlemen representing the dairymen's interests. It was decided to make every analysis in duplicate and the mean thereof should be taken as the correct reading.

DAIRY.	No. of Cows in Herd.	Specific Gravity.	Percent. of Butter Fat.	Per cent. of Total Solids.	Per cent. of Water.
*F. M. Williams.....	14	1.0303 Duplicate.	5.15 5.33	14.66 14.49	85.34 85.51
		Mean	5.24	14.57	85.42
*R. L. Chilton.....	15	1.0320 Duplicate.	3.98 4.03	13.26 13.19	86.74 86.81
		Mean	4.00	13.22	86.77
†J. P. Puissegur.....	19	1.0314 Duplicate.	5.37 5.27	14.29 14.42	85.71 85.58
		Mean	5.32	14.35	85.64
†A. Duchien.....	8	1.0308 Duplicate.	4.82 4.97	14.69 14.80	85.31 85.20
		Mean	4.89	14.74	85.25

*July 13, 1892. †July 15, 1892.

A. L. METZ,

Chemist City of New Orleans and Board of Health, State of Louisiana.

These analyses were made by Prof. A. L. Metz on the days aforesaid in our presence.

[Signed]

DR. PHIL. A. LUDWIG,
J. A. STORCK.

A perusal of these figures will convince the most skeptical that the standard recommended by the Board of Health is a standard that will not work hardships upon the honest dealer; it is a standard calculated to protect the honest dairyman against his avaricious and unscrupulous competitor; it is a standard to protect (at least to a degree) public health. And as I have said before that in no instance have I found the whole mixed milk of a herd of cows to yield less than 13 per cent. of total solids, except in the milk of diseased cows, or the milk of cows just after parturition.

A census of the dairies in this city, based upon the inspection in 1891, shows the following results:

	No. of Dairies.	No. of Cows.
District 1	43	793
" 2	67	1096
" 3	162	1176
" 4	48	526
" 5	23	433
" 6	119	1483
" 7	60	1140
Total.....	522	7151

Several responsible dairymen place the average yield of milk from a cow at one and a half ($1\frac{1}{2}$) gallons per day; calculating that on April 20, 1892, there were 7291 cows, each yielding $1\frac{1}{2}$ gallons per day, that would give us 10,726.5 gallons of pure unadulterated milk. But the milk which was analyzed on that day gave results averaging 20 per cent. of added water; 2681 gallons at 30 cents per gallon, \$804.30 per day, or per year, \$293,569.50 for added water.

On July 1, 1892, 7291 cows yielding quantity as above, 10,726.5 gallons, the milk analyzed that day 7.5 per cent. adulteration, which shows water added 869 gallons, at 30 cents per gallon, \$260 per day, showing a saving of \$543.60 per day, or, calculated upon a yearly basis, there is saved to the people the sum of \$198,414; an amount almost equal to the appropriation budgeted for the Department of Public Works and Improvements of this great city.

These figures show that the people of this city paid until April 20, 1892, an average of \$293,569.50 per year (which, by the way, is far below the minimum) for water supplied them. In other words, our people have paid until lately into the pockets of dairymen nearly five times as much for water in the milk (and in many cases not good water, as an analysis of a sample of water taken from a milk cart will show, and which is hereunto appended) as the city of New Orleans pays the waterworks company for all the water needed by the city for technical purposes, and our people are still paying \$95,155.50 for the water supplied through milk.

Gentlemen, this is the money side of the milk question, and, as a public official, I would be derelict in my duties did I

fail to call the attention of the guardians of the public health to this stupendous and monstrous swindle.

Let us view the other side of the important question, and for this purpose I will only quote a few lines from the report of the Maryland Board of Health, 1888.

Dr. Chancellor states in this report that in "New York after the milk inspectors began their work the infant mortality was 3673 less in 1883 than in 1882, when there was no inspection." "In Boston the milk inspection began in 1883, and in that year there was an apparent lessening of deaths among children under 5 years of age from cholera infantum."

A statement like this from such an authority needs no comment.

I can not with justice to myself close this report without calling the attention of the board to the analyses of a sample of water (alluded to before) which was taken from a can on a dairy wagon, marked No. 3983:

Analysis expressed in parts per 100,000.

Odor.	Fetid.
Chlorine	92.60
Equivalent to sodium chloride.....	151.57
Phosphates.....	.600
Nitrites .....	.450
Nitrogen as nitrites and nitrates .....	.936
Free ammonia	1.500
Albuminoid ammonia .....	.750
Organic and volatile matter.....	52.000
Mineral matter.....	287.400
Total solids at 240 deg. F.....	337.561

Remarks: This analysis proves that the water was a sample of sewage.

It is a well known fact that epidemics of typhoid fever and other infectious diseases, such as scarlet fever, may be propagated by infected milk; this being the case, the question of well water (such as the above) mingled with milk is a question that will require your serious consideration and prompt action.

To assume that the mixing of water or other substances with milk is always done through ignorance is something I do not understand and can not believe. It is very probable that either the love of accumulating wealth in as short a period as is possible, or the desire to compete with some rival who is deceiving his customers, leads the milkman to join the ranks of the adulterators. The sooner these people dismiss the idea that we, by prohibiting the nefarious practice of adulteration dis-

regard personal rights and liberties, the better will it be for all concerned.

In conclusion, let me state that I have no prejudices in the matter; all personal feelings have been set aside in the discharge of my official duties; what I have done I have done for the betterment of New Orleans and its people.

Proceedings of Societies.

CLINICAL SOCIETY OF MARYLAND.

STATED MEETING HELD JUNE 3, 1892.

The 268th regular meeting of the society was called to order by the president, Dr. Robert W. Johnson.

Dr. Hiram Woods related a case of.

ECTROPION OF BOTH UPPER LIDS FROM DISEASE OF THE ORBITAL ROOF,

and exhibited the patient.

When the patient, a colored boy, first came under Dr. Woods' care he had had abscesses over the upper eyelid of each eye, which had ruptured spontaneously, leaving fistulous openings about the middle of each lid, from which pus exuded. With a probe, small areas of denuded bone could be felt about an inch back in each orbit. The patient was put upon tonic treatment, and the sinuses healed. The lids were enormously hypertrophied and the entire edge of each lid was fastened with cicatricial tissue to the edge of the orbit. Dr. Woods operated upon one eye in October, 1891, and upon the other three weeks ago. The edge of each lid was dissected from its position and stitched for the time being to the lower lid. The skin was freely undermined and the horizontal incision was converted into a vertical one. The results were highly satisfactory.

Dr. W. B. Platt read a paper on

RUPTURE OF THE PLANTARIS TENDON;

relating four cases that had occurred in his practice.

Dr. Chambers was inclined to doubt the existence of such

a thing as rupture of the plantaris tendon. From the attachment and relations it would not be likely to rupture. The pain is usually at a distance from the weakest portion of the tendon and the ecchymosis is more abundant than we would expect to find in a rupture of a tendon. Some good surgeons incline to the idea that these symptoms point to the rupture of a blood vessel. The deep veins may be in a varicose condition.

Dr. George H. Rohé related four cases of puerperal insanity, in which he had removed the uterine appendages, and exhibited to the society the specimens removed.

Case 1.—White woman, 33 years of age. Married at seventeen years of age. This marriage resulted in the birth of one child. In two and a half years she became widowed, and four and a half years later married a second time. In 1882 she gave birth to a second child, and immediately afterward suffered from puerperal mania, which lasted five months. She remained well three years and then again developed insanity, and was admitted to the insane asylum with acute mania. When admitted to the hospital she was excited and disposed to fight. She had especial aversion to her husband. She indulged in obscene language. She showed no improvement, but a gradual failure of mental faculties. Suffered from incontinence of urine, and paid no attention to the calls of the rectum. Exhibited great excitement during menstrual period.

Physical examination after coming under Dr. Rohé's care in 1891: Unilateral laceration of cervix up to the vaginal junction and intrapelvic induration on the same side. Perineum ruptured into the rectum.

Abdominal section performed October 6, 1891, and appendages removed. Clinical conditions present: Right ovary cystic; left ovary cystic and adherent in Douglas' cul-de-sac; thickening and congestion of broad ligament on right side.

After-history: Patient recovered fairly well from operation. Had an attack of peritonitis, which yielded promptly to the usual treatment of purgation. The stitches were removed on the seventh day and the wound found perfectly united. December 10, patient dresses and undresses herself. Seems much interested in looking at books. Appetite good; sleeps well; does not indulge in profane and obscene language as much as formerly. A week later, very much interested in plants and flowers in the wards, and waters them regularly. Appetite good; sleeps well; general behavior very much improved. Present time: Improvement continues. Has written several letters to her husband and to her children, showing decided interest in her family life.

CASE II.—White woman, aged 37 years; married 13 years; mother of six children. Admitted to the asylum May 16, 1890. Insanity developed during the period of lactation. Previous to insanity she was amiable, cheerful and industrious. Her mother had been insane and her father was very intemperate. Had been insane three days when admitted. Had a previous attack ten years before, probably in connection with the birth of a former child, but no exact history. Was subject to hallucinations. Thought nearly every man she met was her brother in disguise. Imagined that she had the power of healing by laying on of her hands. Had a decided tendency to expose her person. Menstrual period irregular. Emaciated, with haggard appearance. Appetite poor; slept poorly; nervous and restless during the day. Put upon a special diet of eggs, milk, beef tea, brandy, etc., but improvement was very slow. The approach of her menstrual periods could be predicted by the alteration in her behavior in her ward.

Physical examination: Bilateral laceration of the cervix; thickening of the posterior lip; intra-pelvic inflammatory induration of the left side, sensitive to slight pressure.

Operation November 25, 1891. Left ovary was found adherent. Breaking up of the adhesions occasioned some bleeding. Tube on the left side congested and convoluted.

After history: Recovered well from the operation. Sutures were removed on the seventh day. Note, December 17: Patient cheerful, appetite good, sitting up in her room sewing; conversation coherent and has at present no hallucinations, no delusions; simply nervous symptoms such as are present in the majority of cases of induced menopause. At the present time is increasing in flesh and strength; complains less and less of headache and backache and converses entirely rationally. Is much interested in the work about the place and is ready to go home at any time her husband is prepared to make the proper provision for her.

CASE III.—White woman, aged 39 years. Married fifteen years. Has had seven children, the last one born four months previous to her admission to the hospital in August, 1887. Before insanity, was amiable and industrious and neat about the household affairs. No insanity was ever in her family. Insanity came on suddenly after the birth of the last child. First symptom was that some one was after her trying to kill her. She used vulgar and obscene language. Tried to kill her mother. Her language in the hospital was of the most obscene character. She would tear her clothes, break the furniture and tear the plastering from the walls. These attacks were intermittent. About six months ago she began to fall off and at the time of the operation was pale and thin.

Physical examination: Deep laceration of cervix on both sides, with eversion of the lips of the cervix and enlargement of the uterus.

Operation December 15, 1891; Uterine appendages removed; small cyst in left broad ligament; one ovary was adherent; uterus somewhat enlarged.

After history: Recovery from operation very good. From being one of the worst cases in behavior, language and general character, she became one that could be kept upon the best ward of the house. She is not well, and probably never will be. She has gained in flesh; sews, goes out on the lawn, attends the dances regularly and behaves very well. This patient and the first one will probably never be well, as both are in a condition of somewhat advanced dementia; but they have become better patients.

CASE IV.—White woman, aged 38. Native of North Carolina and resident of Baltimore. Admitted in 1891, suffering from mania. Mother of three children. Had an attack of insanity after the death of the first child, and another after the birth of the second child. The third attack came on twelve and a half months after the birth of her third and last child—the second and third attacks considerably after the births of the respective children. The first attack was a true case of puerperal insanity, and probably determined the others. When admitted was in a state of excitement and indulging in obscene language. Her temperature ran up and her heart grew weak. She was put upon digitalis, eggs and milk every two hours. She gained in strength, but her mental symptoms were unimproved.

Physical examination: Deeply lacerated perineum, lacerated cervix and prolapsed ovary.

Operation March 9. Appendages removed. Great enlargement of the ovaries of both sides.

In this case hereditary taint was denied. Her menstrual periods were regular. While at home she was jealous of her husband's sisters. Was fond of drink, but had not access to much of it. Was indolent and careless. Was fond of talking about sexual matters.

After history: Three weeks after operation mental condition good; language to physicians chaste; appetite good. May 8, 1892, was discharged from the hospital recovered.

This woman up to the time of the operation used the most profane and obscene language Dr. Rohé had ever heard. When she recovered from the effects of the anæsthetic she burst into tears and asked the doctor's pardon for the ugly language she had used. She never afterward used any ob-

scene or insane language to any one connected with the hospital.

In conclusion, Dr. Rohé said: "I believe that in these four cases we have a contribution to the etiology of puerperal insanity. I believe that puerperal insanity is a phase of insanity that it is due to absorption of septic matter, and when it is recurrent that it is the result of some reflex irritation due to an inflammatory condition in the pelvis or pelvic organs. All the cases which I have examined show some lesion of the genital canal remaining from parturition. The result of the treatment in these cases show this—that if cases are taken before structural alterations have taken place in the brain, before dementia has come on, that in the large majority of cases restitution of the mental faculties can be accomplished. There is another advantage, I believe, in this radical mode of treatment of this condition; that is, that a woman whose appendages have been removed will never have another attack of puerperal insanity at all events.

Dr. Winslow: Are these selected cases? Are they all the operations which Dr. Rohé has performed for insane conditions since he has been at Spring Grove?

Dr. Rohé: This is a series of cases due to one single cause. I have operated upon fifteen cases. In nearly every case there was some lesion of the pelvic organs. I expect to report all of these cases in the future. I believe that I will be able to report four or five as restored mentally. Nearly all have shown evidences of improvement. They are better patients; they are not so disposed to soil, they can be kept on better wards with quieter patients. This is a decided gain for the management of the hospital.

W. T. WATSON, M. D.,

1519 Broadway, Baltimore.

Secretary.

ALLEGHENY COUNTY MEDICAL SOCIETY.

CLINICAL NOTES ON A CASE OF HYSTERIA IN A BOY EIGHT YEARS OF AGE.

By SAMUEL AYERS, M. D.

Mr. President and Gentlemen: The rather infrequent occurrence, or perhaps recognition, of hysteria in young children, induces me to report the following interesting case:

William T., æt. 8 years, had good family history, and previously good health. In the early part of December, 1891, while attending school, he became involved in a quarrel with four boys, who pitched upon and struck him about the face

and head, there being left, however, no visible bruises or marks of injury. Immediately after returning home that evening he complained of a severe headache, not specially localized. This continued without abatement for about two weeks, when the family physician, Dr. Wallace, of Ingram, was consulted. After treating the patient a few weeks there was still no improvement in the headaches, but otherwise the boy's general condition was not much impaired. He had not been allowed to attend school since the accident, but played about the house, had a fair appetite, bowels were regular, and there was no abnormal variation in temperature or pulse. But he was pale, and complained of almost constant headache. On the advice of Dr. Wallace, his eyes were during this time examined by Dr. Geo. W. Allyn, who found a low degree of astigmatism and prescribed glasses.

On the morning of January 17 last, the boy had a fainting spell before breakfast and became pale, weak and languid, complaining severely of the usual headache. At that date Dr. Wallace referred the parents to me, and the boy was brought to my office on the 18th of last January. A careful examination was made. Mentally the boy seemed clear, and gave prompt answers to all questions. His face was rather pale, the pupils widely dilated, contracting slightly to bright light. The tongue was extruded straight and not much coated. The pulse about 80, temperature normal. No abnormal motor or sensory phenomena were noted. The optic disks were normal. The urine contained neither albumen or sugar.

The headache, of which only he complained, was referred to the vertex and forehead. The nature of the case was not entirely clear to me. The cause was obviously connected with the injury to the head, as he had been perfectly well up to that time. I therefore inclined to the opinion that the case was one of simple neuralgia, or else a slight injury to the cerebral membranes, perhaps a localized patch of congestion in the frontal region.

On this theory I prescribed small doses of sodium iodide and sodium bromide; also one grain of ergotin three times daily, and blistered each mastoid process. In three or four days the boy was brought back to my office without any improvement in the headache. The same treatment was continued excepting that $\frac{1}{8}$ grain of protiodide of mercury was substituted for the ergotin. A mild galvanic current was passed for a few minutes from forehead to occiput. The parents were directed to discontinue this treatment in two days if he were not better, and to give tablets containing three grains of antipyrin every three hours.

The day following this I was summoned in great haste by the father to meet Dr. Wallace, the former stating that he thought his son was dying. It seems that the lad complained of being sleepy and tired, and sitting on a rocking chair apparently went to sleep, but at once exhibited some general convulsive movements and became wildly incoherent. When Dr. Wallace and I arrived the boy was in bed and appeared rather bright and talked rationally. His pulse was about 90, temperature normal. He complained, as usual, of the headache. When questioned as to the spell he had just had, he seemed to remember nothing about it. Very soon he was seized with one of these paroxysms, consisting of symmetrical clonic spasms, of the forearms and hands, the same spasmodic movements passing to the lower extremities, the whole attack lasting scarcely a minute. There was apparently no loss of consciousness; no frothing of mouth: no change in the color or expression of face. At another time there would be a rapid turning of the head from side to side, or contortions of the entire body, or opisthotonos, accompanied by profane utterances, or other incoherent outbursts, terrifying and shocking his parents. We withdrew the iodide, increased the bromide to 10 grains every three hours, and gave a little tr. of opium and aconite. Broths and other concentrated nourishment were given and accepted at frequent intervals.

At our consultation the following day the boy was rather worse. The paroxysms above described had been more severe and frequent. The breathing at times had been irregular and jerky; diplopia had been observed. The head was occasionally retracted and bored into the pillow. The parents stated that he had been very "flighty;" that at times his eyes were glassy and upturned, and that they thought in one of these spells he would die. He had taken nourishment and slept fairly well, though during sleep there was much muscular twitching and catching respiration. When we entered the room the boy greeted us and smiled, and talked intelligently. We soon got him out of bed and tried to have him walk. His gait was very unsteady and he settled well back on his heels, inclining to fall backward. But with assistance he walked some.

Replacing him in bed and retiring from the room we silently observed him through the slightly opened door. In a few moments he had one of the paroxysms above described. Gliding in swiftly, I pressed firmly on the supraorbital nerve. The boy immediately ceased his contortions, cried with pain, and said I had hurt him. We desired no further proof of the nature of the case, and the subsequent history confirmed the

diagnosis. On appropriate treatment, of tonics, outdoor exercise and the ignoring of his headache by the family, the boy gradually recovered, only once after having a hysterical attack, which was promptly arrested by the same means.

The fact that the patient was a boy, that he was so young, and that the headaches seemed to be of traumatic origin, quite misled us for a short time, as to the real nature of the trouble.

I will not detain the society with any remarks on hysterical affections in young children. They do, of course, occur in children of either sex, much younger than this one, but are, I believe, comparatively rare in our country. In France, nursery hysteria is by no means uncommon.

AMERICAN ORTHOPÆDIC ASSOCIATION, NEW YORK.

THE WEIGHT OF THE BODY IN ITS RELATION TO THE PATHOLOGY AND TREATMENT OF CLUB-FOOT.

By A. B. JUDSON, M. D., Orthopædic Surgeon to the Out-Patient Department of the New York Hospital.

I desire to present a few thoughts of an extremely practical kind relating to the treatment of talipes equino-varus. Beginning with congenital club-foot it is well to bear in mind that there is a vast difference between a child recumbent and a child walking. While the child is in arms the case is yet free from the complications and difficulties caused by the falling of the weight of the body on the deformed foot. These twelve months, more or less, are the most important year in the history of the case, because, in this period, the foot is to be changed so that, when the child begins to walk, the use of a slight walking brace, exerting only a moderate degree of force, will convert the weight of the body from a deforming to a correcting agent. During these months of recumbency, with the weight of the body out of the way, with all the tissues soft and formative, and the foot more than doubling in size with the growth of the child, there is every reason to expect to succeed in what we undertake, provided time enough be given to the case and faithful attention to the details.

The apparatus which I have conveniently used to effect this reduction, before the child learns to stand, is a simple retentive splint which acts as a lever, making pressure on the outer side of the foot and ankle, at A, in Figs. 1 to 4 inclusive, and counter-pressure at two points, one on the inner side of the leg, at B, and the other at the inner border of the foot, at C. It is advisable to keep in mind that this simple instrument is a lever, because, if we know that we are using a lever, with its

three well defined points of pressure, we can make the apparatus more efficient than if we view it, in a more general way, as an apparatus for giving a better shape to the foot.

I use a little brace made of sheet brass, doing the work with a few simple tools. An advantage of doing the work one's self is that there is no room for doubt as to where the blame lies if the apparatus does not work well. Two covered disks, B and C, Figs. 3 and 4, are riveted to a shank, D, and thus is formed that part of the brace which applies the two points of counter-pressure, while, on the other hand, the point of pressure is brought into action by a third disk or shield, A, which is drawn tightly against the outer side of the foot and ankle, and held in place by a strip of adhesive plaster, E, which includes the limb and the piece which connects the two disks, B and C. The disks are lined with two or three thicknesses of blankets, easily renewed, when necessary, with a needle and thread. These braces are so cheap and easily knocked together that it is nothing to apply new and larger ones, using heavier material for the shank as the child grows. In general three sizes will be enough, the shanks being 12 gauge $\frac{3}{8}$ in. wide, 14 gauge $\frac{1}{2}$ in. wide, and 16 gauge $\frac{5}{8}$ in. wide. The disks are conveniently made from 22 gauge $1\frac{1}{4}$ in. wide. The rivets are copper belt rivets No. 13. A lip turned on the edges of the disks with the flat pliers gives stiffness to the thin brass and protects the skin from the rough edge. If more easily obtained, tin disks, light bars of iron or steel, and ordinary iron rivets would doubtless answer.

The brace is applied with three strips of adhesive plaster. The upper and lower pieces, F and G, Fig. 4, are simply to keep the apparatus in place, which they do effectively if ordinary gum plaster is used, while, by drawing the middle strip, E, tightly over the shield and straightening the brace from time to time, the deformity is gradually and gently reduced. At each re-application the brace is made a little straighter than the foot at that stage. This may readily be done by the hands, and then the adhesive strip is to be tightened over the shield till the shape of the foot agrees with that of the brace. After a few days the brace is to be made still straighter and again re-applied, and made tight till another point of improvement is gained. The brace is applied very crooked at the beginning of treatment, as in Figs. 3 and 4, and is straightened from time to time, and a longer brace applied as the deformity is reduced and the patient grows. It should be removed every week, or two weeks, and an interval of a few days allowed for freedom from the brace, when the mother is advised to manipulate the foot constantly, using as much force as she will in the direc-

tion of symmetry. Manipulating the foot during these intervals is of great importance, as cases have occurred in which varus and equinus have been entirely overcome by the mother's hand alone.

By this simple and prosy treatment, carried out systematically and without haste, or violence, or pain, the foot, unless it is a frightful exception, may, with certainty, be changed from varus to valgus. At the same time the tendo Achillis is

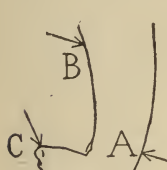


Fig. 2.

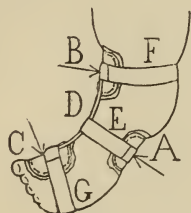


Fig. 4.

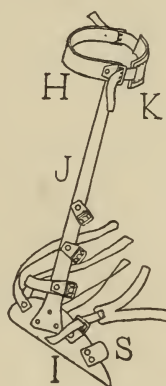


Fig. 9.

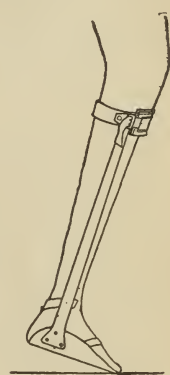


Fig. 11.



Fig. 8.



Fig. 7.



Fig. 5.

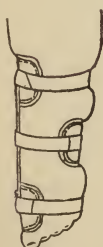


Fig. 6.

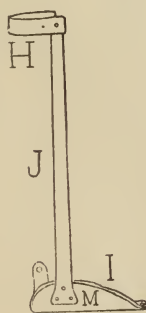


Fig. 10.



Fig. 12.

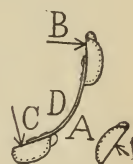


Fig. 3.



Fig. 1.

lengthened till the position of the foot is near the norm, or at right angles with the leg, as the result of manipulation and giving the brace from time to time a partly antero-posterior action. Figs. 3 and 4 show approximately the shape of the brace at the beginning of treatment, Figs. 5 and 6 when the varus is reduced, and Figs. 7 and 8 when valgus has taken the place of varus. The foot, in this latter stage, may not hold itself valgus, when left to itself, but, with almost no force, and

with one finger, it may be pushed into valgus; and in this condition it must be when the child begins to walk, and then another stage of treatment begins.

When the patient begins to walk we have a new difficulty. It is now seen that the weight of the body, falling on the tender and ill-formed foot, will, if not properly directed, defeat all our efforts. Let us, for a moment, consider the mechanical environment of the human foot. In the first place, the corporeal weight, which the quadruped distributes among four pedal extremities, falls in man upon two. Again, the small floor area covered by the feet, and their slight structure, seem unequal to the task of supporting the towering frame above them, which in some cases almost resembles a pyramid resting on its apex. And when we observe the effect of active locomotion we see weight and momentum combine in an apparent effort to crush and destroy. And furthermore, when extraneous weights are added and the strain is prolonged, as in the case of the burden-bearer among savage tribes, or the infantry soldier on a forced march, the endurance of the foot excites wonder. It is not strange that the feet are subject to ailments, to blisters, bunions, ingrowing nails, hallux valgus, hammer toes, loss of the arch, weak ankles, painful affections of the metatarsus, perforating ulcers, osteitis, and the varieties of talipes. The wonder is that they are not permanently disabled soon after walking is begun, and certainly when the adipose tissue of the body takes on the development which accompanies age and good living. The gourmand, Savarin, said that, among the works of creation, the design of the human foot was a conspicuous failure. Considering the immense weight carried by the foot, it is evident, however, that only the most perfect natural adaptation of mechanics has enabled this insignificant member to perform its superlative functions, and that great caution should attend all procedures having for their objects its artificial reconstruction.

It is also sufficiently evident that the correction of club-foot by mechanical means, while the patient continues walking, is a problem beset with difficulty. We have, however, a luminous ray of hope and encouragement in the observation that, in talipes varus, there is an important boundary line between deformity and the norm. If the foot is held in some way, now to be considered, on the right side of this boundary line, each step forces it in the direction of valgus and the increasing weight of the child is a powerful force acting in the right direction, or away from varus, so long as the foot is held, though never so little, looking toward symmetry. It may be said that the child stamps his foot straight. If, on the other

hand, the foot is held or allowed to fall on the wrong side of this line, though never so little, each foot-step is a blow, driving the foot more and more into the varous position.

This point may be illustrated by the hand placed with its ulnar border on the table. If considerable pressure be made on the table, by the hand so placed, it becomes evident that there is a boundary line between pronation and supination. If the hand is pronated, never so little, additional pressure will force the palm into pronation, which represents valgus in the foot, and if the hand be supinated in the slightest degree, additional pressure will force the palm into complete supination, which represents varus in the foot.

By the application of this idea, the weight of the body may be made a beneficent, instead of a harmful, factor in the progress of a case of talipes varus, and the walking brace should be constructed with this in view. It should be made of steel, and by an instrument-maker. One of its chief functions is to act as a lever, but the leverage is applied not chiefly to overcome the deformity by direct force, as in the retentive brace above described, but to hold the foot on the right side of the boundary line above mentioned, so that the weight of the body may straighten the foot, or overcome the varus in a direct and forcible manner, without general or local inconvenience.

The walking brace consists, as usual, of leg-band, H, Figs. 9 and 10, foot-piece, I, and upright, J, riveted firmly together. A movable joint at the ankle should be discarded, as it undermines the lever by introducing an element of instability, and in this brace serves no good purpose. Mild steel alone should be used, to facilitate alterations in shape, as point after point of improvement is gained, and to make easy the shifting of buckles and straps, as may be required, all of which may be done by the use of a few simple tools. The upright is to be on the inner side of the leg, as in Fig. 14. The upper part of the brace makes counter-pressure on the inner side of the leg, but it has another important function, in previously neglected cases, which is secured by the steel band passing across the back of the leg, to which are fastened two buckles for the attachment of a piece of webbing, K, in Fig. 9, which passes across the front of the leg. The steel band should make no pressure on the limb, as its use is simply to furnish attachment to the buckles. A piece of webbing spanning the front of the leg in this manner, and carrying a pad, performs an important service in cases, like the one shown in Fig. 12, in which, from previous neglect, the varus has not been reduced before walking begins. It transfers a part of the weight of

the body from the anterior part of the sole of the foot, where it interferes with the correction of the varus, to the upper part of the anterior surface of the leg, where it is powerless to interfere with the treatment. That the weight-pressure thus transferred is considerable, is shown by the callus and bursa which appear where the padded strap crosses the leg near the tubercle of the tibia. This mechanical effect is similar to that of the brace, shown in Fig. 11, used in the treatment of paralysis of the muscles of the calf, resulting in talipes calcaneus.

The upper part of the brace is also to be considered in another light, as follows: In previously neglected cases it is well to incline the upright 15 deg., or 20 deg., or more, backward from the vertical of the foot-piece, as is shown in Fig. 9. Although correction of the equinus is postponed by this inclination of the upright, we are thus enabled to apply a better leverage against the varus, and when the varus is reduced, and the time arrives when the equinus is to be corrected, this backward inclination of the upright is to be lessened from time to time till the vertical is reached, as in Fig. 10, or till the upright has an inclination forward, allowing the corporal weight to fall more and more on the anterior part of the sole of the foot, and gradually lengthen the tendo Achillis. The vertical upright, Fig. 10, is to be applied at once to patients in whom the deformity has been corrected before walking begins.

We will now pass to a consideration of the other end of the brace, the foot-piece, which is to be made of sheet steel ranging from 18 gauge, for a child learning to walk, to 12 gauge for an adult. It has the usual tread, L, Fig. 13, and riser, M, Fig. 10. The heel-cup is formed by a piece of webbing, N, Fig. 13, passing behind the heel from the lower part of the upright to a spur, O, Fig. 13, which projects upward from the back part of the outer border of the tread. Viewing the apparatus again as a lever, for the forcible reduction of varus, in a previously neglected case, counter-pressure is made along the inner border of the foot, and on the upper part of the inner side of the leg, while pressure is made by one strap, or more than one, riveted and buckled to the foot-piece and the upright. But one strap is shown, P, in Figs. 13 and 14. This will be sufficient in the case of a child whose varus has been corrected before walking begins, but in a previously neglected patient, in whom the varus has yet to be reduced while the child is active on his feet, two, three, or more straps may be added, as shown in Fig. 9, partly encircling the foot, ankle and leg, the positions of the buckles and the straps being where they will assist most efficiently in opposing the varus and holding the foot in the best position to receive the weight of the body

These parts of the apparatus may be shifted many times, with advantage, in the treatment of a given case of unusual difficulty, and, in addition, a most efficient agent for applying continuous pressure is found in a strip of adhesive plaster, Q, Fig. 14, sewed to a piece of webbing, R, the plaster partly encircling the foot and ankle, with a single tail, or two tails, as may be required, and the webbing being drawn tightly and buckled to the inner side of the riser. This device does more than simply to increase the amount of pressure; it also keeps the heel down on the tread of the foot-piece, and, more important still, it gives the foot a rotation outward, and thus directs the sole of the foot forcibly toward the ground, in the best position for making the weight of the body a corrective instead of a deforming force. The riser of the foot-piece may also, in previously neglected and difficult cases, carry an ear, S, Figs. 9, 13 and 14, made of sheet brass, which is to be bent downward over the first metatarso-phalangeal joint, to prevent the inner border of the foot from overriding the edge of the riser. The foot-piece is to be lined with adhesive plaster, in several thicknesses if necessary, to prevent rust, and with a piece of leather fastened to the tread and spur with copper rivets, as shown in Fig. 10. In practice the details demand as much attention as the principles of treatment. The brace is to be applied over the stocking, the strap, R, passing through a hole cut in the stocking, and is hidden by the patient's trousers and shoe.

We will now consider the upright of the brace. It is a flat, tapering bar of mild steel, and when first applied to a previously neglected case, such as is shown in Fig. 12, should have a curve resembling that of the varus foot. The bar, though sharply curved, as in Fig. 13, should, however, be somewhat straighter than the foot, when the latter is forced manually into its best position. The multiple straps, shown in Fig. 9, should then be buckled and tightened daily till the continuous leverage has partly reduced the varus. The upright bar should then be somewhat straightened and another point of improvement be gained, the patient in the meantime following his ordinary pursuits without interruption. In due time the upright bar and the foot itself will both be straight, as seen in Figs. 15 and 16—in other words, the varus will be reduced. The upright should then be bent from time to time in the direction of valgus, as seen in Fig. 17, and the persistent and gradual effort resumed until the foot has been pushed, or pulled, or pried, over the boundary line into the domain of valgus, as seen in Fig. 18. These efforts would not be necessary if the varus had been converted into valgus before the

child had learned to stand. In very badly neglected cases the interference of the weight of the body with the treatment may be prevented by the recumbent position, or the use of a high sole on the well foot and the ischiatic or axillary crutch, until the varus has been materially reduced. In all cases, when the child is old enough to be docile, domestic instruction and drill in eversion of the foot and in the proper management of the foot in locomotion should be a part of the education.

As soon as the foot has reached the valgus shape, whether it be at the moment of learning to walk, or only after prolonged effort, in a neglected case, a curious effect will be observed. It will be seen that the outer border of the tread of the foot-piece is raised from the ground, as seen in Figs. 19 and 20, and that we have secured, in a convenient manner, the effect which is sometimes sought by building up the outer border of the sole of the patient's shoe. This is a welcome and powerful ally in our attempts to hold the foot in a favorable relation with the weight of the body and the ground.

The walking brace has been above described as though its chief use were to reduce varus which has become more or less confirmed by the habit of walking on the outer border of the foot. Strictly speaking, such cases should never occur. They are, however, too common, and always indicate that the child has been neglected from the period of recumbent infancy, when deformity of this kind is the most easily overcome. If the varus were always corrected before the child learns to stand, then the only use of the walking brace would be, as shown in Figs. 19 and 20, to gently hold the foot in valgus, so that the weight of the body shall be sufficient to lead the child to grow up with a foot practically normal. As such a child outgrows the brace, a larger one is to be made, and when three or four years old the foot will, without the help of the brace, strike the ground so fairly that for two or three years all treatment may be suspended. The patient is to be observed from time to time, however, and, as the foot grows in its original inclination to varus, it will, after the lapse of two or three more years, have to be kept in proper position, under the rapidly increasing weight of the body, by a walking brace adapted to its needs for another period of two or three years. When the foot is full grown it will be shapely in appearance and practically perfect in its ability to perform all the duty of a foot congenitally normal.

Although congenital club-foot has been chiefly kept in mind in the above pages, the views expressed in regard to the influence of the weight of the body are applicable also to talipes varus of paralytic origin. In this affection, at an early

stage and before the foot has lost its flexibility, a simple walking brace is needed, as in Figs. 19 and 20, to properly direct the action of the weight of the body on the paralyzed foot. At a later period, if this measure has been neglected and the foot has been allowed to become varous, and more or less inflexible, the case will require more attention and probably prolonged effort, with multiple straps and adhesive plaster, to carry the foot across the line between deformity and the norme, to the position in which the weight of the body shall be a correcting and not a deforming force.

Correspondence.

AMERICAN PUBLIC HEALTH ASSOCIATION.

THE UNITED STATES OF AMERICA—THE DOMINION OF CANADA—
THE REPUBLIC OF MEXICO.

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PRESIDENT'S OFFICE, }
NEW ORLEANS, September 20, 1892. }

To the Editor Medical and Surgical Journal:

DEAR DOCTOR—Please allow me to call your attention and that of your numerous readers to an approaching event of unusual importance.

The twentieth annual meeting of the American Public Health Association will be held in the City of Mexico, November 29, 30, and December 1, 2, 1892.

For the first time in its history, our great national association will meet in a foreign country; this meeting will probably be the largest and most important ever held. The Mexican government and all the States of the Republic will be represented by special delegates. Invitations have also been ex-

tended to Cuba and to Central and South America. Great results are expected from the active co-operation of the different countries with ours, looking to the gradual stamping out of yellow fever, in its primitive *foci*, the adoption of a uniform system of quarantine and other sanitary measures of equal importance.

The Mexican government has interested itself in the work, thereby assuring the success of the meeting. All the details are in the hands of the federal officers of the Republic.

Prominent sanitarians and scientists of the United States, Mexico, and the Central and South American Republics, will take an active part in the meeting.

Every one interested in Public Sanitation, and having at heart the welfare of his country, should at once become a member of our association. This occasion will offer an unusual opportunity to visit an extraordinary country, under the most favorable circumstances and at a very small cost, the round trip from New Orleans to the City of Mexico and return costing but \$52. Cost of membership, \$5 a year, which amount entitles the member to the bound volume of the Transactions delivered free of expense. These volumes constitute in themselves a most valuable library upon sanitation.

Splendid receptions will be given in honor of the association by the federal and city governments, as well as by prominent citizens of the Republic. President Diaz will give a Fiesta de Noche at the famous Castle of Chapultepec.

Excursions for sight seeing in the environs of the City of Mexico, will offer special attractions to visitors.

As a Louisianian and as president of the association, I earnestly desire as many of our friends and fellow citizens as possible to join our ranks. Let them at once apply to me for membership; I shall take pleasure in endorsing their applications. All those applying for membership before November 15 will be entitled to the reduced railroad rates for themselves and families.

Tickets will be good to December 31, giving ample time to visit that delightful country. There will be special reduced hotel rates, and special Pullman cars will be run on regular trains at the request of fifteen members.

Your personal interest is solicited in this matter. I will be grateful to you for helping to make our coming meeting a great success.

Hoping you will accompany us to Mexico, I remain,

Very truly yours.

DR. FELIX FORMENTO,
President.

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Articles from physicians are respectfully solicited. All articles, news and exchanges, and books for review, should be sent to the EDITOR, NEW ORLEANS MEDICAL AND SURGICAL JOURNAL. Business communications should be addressed to the BUSINESS MANAGER, NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

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COLLABORATORS:

DR. F. W. PARHAM.

DR. H. W. BLANC.

DR. A. W. De ROALDES.

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Editorial Articles.

A NATIONAL SANITARIUM FOR CONSUMPTIVES.

The JOURNAL has often called attention to the prevalence of consumption in New Orleans. The subject is one that has a more than melancholy interest for us, since the disease mentioned causes more deaths in this city than any other single disease. It is not like yellow fever or cholera, that carries off its victims in a few hours, and appals by the suddenness of its action; consumption comes on so slowly and insidiously that it often gains a firm foothold before its presence is revealed. When once it has selected its victim it moves along by almost insensible degrees, and thus friends and relatives are not suddenly aroused at any time concerning the life of the patient; they gradually become accustomed to his ailment, and this long and often intimate acquaintance breeds a familiarity with the disease that renders them indifferent to their own safety—for every consumptive should properly be regarded as a source of danger to those around him, and intelligent measures should be adopted to keep a possible danger from developing into a disastrous fact.

Consumption, however, is not merely a local matter; it does not confine its devastations to New Orleans, but, on the contrary, it brings suffering and sorrow to every community on the face of the earth. Each year the victims of consumption all over the world exceed 5,000,000—truly a frightful tribute to one monster. The true nature of the disease remained unknown for many centuries, and it is therefore not surprising that persons not afflicted did not interest themselves in the subject as deeply as they should. As an evidence of the educational influence of physicians and public health associations, it is gratifying to turn to a speech delivered in the United States senate, at the last session of Congress, by the Hon. Jacob H. Gallinger, of New Hampshire.

The honorable gentleman opened his speech with words the truth of which will be recognized by every physician. “The statistics of mortality show that consumption destroys more lives than war, pestilence and famine combined, and the individual sufferer is powerless to cope with this relentless enemy of mankind;” and, as a step toward the practical solution of a mighty problem, he calls upon Congress to furnish the means to carry out the best plan of treatment that the accumulated wisdom of the medical world has decided to be the best, namely, climate.

The senator collected a large amount of expert information from various sources concerning the localities in the United States best suited to consumptives; the American Health Resort Association contributed largely to the store of facts upon which the senator’s remarks were based. The consensus of opinion was that a vast region lying in Western Texas, all of New Mexico, part of Arizona, Southeastern Colorado, and Southwestern Kansas, enjoys a health-giving climate which, in latitude, longitude and altitude, is unequaled in any other country on the face of the earth. This stretch of country is capable of supporting the present population of the United States.

Physicians have long known that life on the plains was beneficial to consumptives; but the efforts of Mr. Gallinger have resulted in locating the best part of all this good region; he has indicated the ideal place for consumptives. The ter-

ritory of New Mexico contains the San Augustin plains, 4800 feet above the level of the sea, and surrounded by mountains from 1200 to 1500 feet in height. One of these plains is 170 miles long and about eighty miles wide; it is covered with vegetation all the year round, and the weather is rarely unpleasant enough to interfere with outdoor exercise. The temperature averages 62 deg.; no dust, no malaria, and a very porous soil. Some consumptives who were unable to walk when they first arrived, recovered and enjoyed almost vigorous health.

Here is one stretch of ground containing more than 13,000 square miles, with more like it. The bill introduced into the senate provides that the president shall appoint a commission consisting of three persons, two of whom shall be physicians, whose duty it shall be to select a site, and report thereon to the president, for the establishment of a national sanitarium for the treatment of pulmonary diseases; the site to be located in one of the territories of the United States, and upon such of the public lands as may be unoccupied.

There can scarcely be any doubt as to the power of Congress to set aside lands for the purpose mentioned, since the Hot Springs Reservation is a parallel case; and no sane man can for a moment question the benefits to be derived by a vast army of sufferers who would otherwise be doomed to an early grave. At present, the climatic treatment of consumptives is left altogether to private enterprise and the knowledge of individual physicians, which latter is bound to vary; but if the national government were to take up the matter in a serious and systematic manner, we can not doubt that, physicians and people being educated up to the necessity of a residence at the sanitarium at an early stage of the disease, wholesale benefits would be derived where now a few occasional cases are reported. Instead of one person being snatched from the grave, a thousand would be assured a long life, and, moreover, a life of active usefulness, instead of a year or two of despairing helplessness.

Among the multitude of measures introduced in Congress for the welfare of the people, we can scarcely think of any that could be more important than the one referred to above.

Every afflicted person will wish to see it assume tangible shape; and not only the friends and relatives of the victims will join in the wish, but also the conscientious physician, whose heart feels heavy with sympathy and pity as soon as a patient consults him with the hand of death already extended toward the unsuspecting sufferer.

ELECTION OF RESIDENT SURGEONS AT THE EYE, EAR, NOSE AND THROAT HOSPITAL.

On the first Wednesday in December the Executive Committee of the Eye, Ear, Nose and Throat Hospital will elect four resident surgeons, to serve from January 1, 1893, to January 1, 1894. Physicians desirous of availing themselves of the great facilities offered by this institution should send in their applications to Mr. Jos. A. Hincks, secretary, 29 North Rampart street.

OUR MILK SUPPLY.

The attention of our readers, and particularly those residing in New Orleans, is drawn to the able report of Mr. A. L. Metz, city chemist. The deductions from his investigations are not uniformly of an agreeable character. It will not send a thrill of joy through the souls of milk consumers in the city to learn that they, in the aggregate, have been paying nearly three hundred thousand dollars a year for water used to adulterate milk—and not very clean water at that. That aspect of the question, however, dwindles into almost invisible insignificance when compared with the mortality among children due to impure milk. Prof. Metz quotes a passage from the report of Dr. Chancellor to the Maryland Board of Health. He says: “In New York, after the milk inspectors began their work the infant mortality was 3673 less in 1883 than in 1882, when there was no inspection. * * * In Boston the milk inspection began in 1883, and in that year

there was an apparent lessening of deaths among children under five years of age from cholera infantum." Allowing for differences in population, and other things being equal, we may reasonably hope that the present system of milk inspection pursued by the Board of Health will result in a saving of five hundred or a thousand lives each year—and this alone would justify any amount of expense or trouble that might be incurred. When such a mighty saving of life is in prospect, no attention should be paid to cost or the annoyances and inconveniences entailed upon the purveyors of milk in the carrying out of a rational and systematic plan of inspection.

DEATH OF RESIDENT STUDENT THIGPEN.

The staff of the Charity Hospital has been called upon to mourn the death of one of its most valued members. On Thursday, September 8, 1892, Henry F. Thigpen passed away, after suffering for three weeks from a severe spell of malarial fever.

Mr. Thigpen was born in Greenville, Ala., in 1871. His family moved to Keachie, La., in 1886, where his father filled the chair of mathematics in Keachie College. Henry Thigpen graduated from this institution in 1889, and in the same year began his studies in the medical department of Tulane University of Louisiana. In 1891 he became a resident student of the Charity Hospital after a competitive examination. He was serving his second year as resident student when the final summons came.

Throughout his entire college and hospital career he was remarkable for his devotion to duty, and thoroughness and conscientiousness in the performance of all the work that fell to his lot. In H. F. Thigpen the Charity Hospital not only lost a most faithful officer, but the community lost a youth full of bright promise, and one whose intellect and manliness compelled the respect and admiration of all whose privilege it was to come in contact with him.

Abstracts, Extracts and Annotations.

MEDICINE,

OUTLINE OF A PLAN FOR AN EPILEPTIC COLONY.

By FREDERICK PETERSON, M. D., Attending Physician to the New York Hospital for the Nervous and Epileptic; Chief of Clinic, Nervous Department, College of Physicians and Surgeons.

It is a great pleasure to come before this board at the invitation of Mr. Letchworth and of your president, Mr. Craig, to speak to you upon a subject in which I have been deeply and earnestly interested and engrossed for five or six years, knowing that the law in this State has been passed, and that you are a commission appointed under that law, not only to select a site and prepare plans for an epileptic institution, but to prepare those plans on the colony system, with a view not only to the care-taking of this class, but to their education and their instruction in different trades and callings.

In this work we must lose sight of the word "institution" if possible. We must rather think of some small village. The less it is like an institution the better. There should be no very large buildings, nor should there be a symmetrical arrangement of the pavilions, cottages, workshops, etc., such as has been made at Gallipolis, Ohio. Although the ideas as to the character of an epileptic retreat, such as I have always maintained and frequently described in various papers, were carefully instilled by me into the Ohio commissioners who visited me in New York with their architect, and although my instructions were, in the main, followed in the distribution of buildings and the determination of their character and purposes, yet it was not apparently possible for the architect to rid himself of the hospital, asylum, or institutional idea, and doubtless, too, the people in the vicinity were eager in demanding something imposing in the way of State architecture.

1. The first point, then, to be borne in mind is that *buildings should be arranged in a village or colony plan*, separated entirely, often provided with their own little gardens, surrounded by hedges, so that they shall be as independent and home-like as possible. *Though there should be system in their arrangements, there should be no symmetry*, such as would lead to their designation as an asylum or an institution at first sight.

2. The second point is to keep in mind the aims of the colony.

(a) *It is to be a home*—a community of people cut off all their lives from ordinary social pleasures and pursuits by a malady that really robs them, in most cases but for a few moments each day, or week, or month, or several months, of their faculties.

(b) *It is to be a school*. Denied education in public schools, the epileptic here receives such advantages as he requires, and each and every member of the colony, without regard to age, should be given the opportunity, if desired, of acquiring knowledge.

(c) *It is to be an industrial college*. All useful trades and callings are to be conducted in this colony. Hence, provision for shops of various kinds must be made.

(d) *It is to be a hospital*. That is, every patient will be treated for his disorder, and there will be one building set aside for such as are feeble-minded, or insane, or confined to bed.

3. The third subject for consideration is the probable percentage of the various classes. Roughly speaking, we should provide an observation building for new cases (5 per cent.), hospital accommodation for say 10 per cent., school buildings for 15 per cent., and shops, residences, etc., for some 70 per cent. of workers.

4. As to land, there should be from 300 to 400 acres or more, if possible, diversified but well adapted for agriculture, stock-raising, and the like. Out-of-door employment is one of the best means of treatment of epilepsy.

5. The colony should be situated in the centre of population, because of ease of access for patients and advantages for the visitation of friends. But a far more important reason for placing it near the largest city of the State is to secure the services of a visiting board of those gentlemen who make a specialty of nervous and mental diseases, and of an expert pathologist, who, together, would make it one of the great objects of the colony to discover the cause and cure of a disease from which some 120,000 people are suffering in the United States alone at the present time.

6. Suggestions as to buildings and their arrangements:

(a) The superintendent should have a private house to himself.

(b) The observation wards (5 per cent. of cases), the infirmary wards (for the sick, infirm, demented and insane, amounting to 10 per cent.), and the administration building could be combined advantageously. The observation wards are for new comers, who must be examined and studied for weeks at a time in order to ascertain their character, their abilities, the

nature of their seizures, and the proper kind of treatment for them to undergo. Between these should be the administration building, offices, rooms for one or two resident physicians, accommodation for members of a nurses' training school, etc. Back of these again, but connected by a corridor, are the hospital wards, to be arranged not only for those who are sick from ordinary illnesses, but also for those who are too feeble-minded for work or who are insane. Great pains should be taken to isolate the wards for excited patients to such an extent that no one will be disturbed by them. These buildings should contain small dormitories and private rooms. In some part of the hospital should be a hydrotherapeutic chamber, with walls and floor impermeable to water, provided with rain baths, hot boxes, cold plunge, douches and bath tubs. There should be separate kitchens and dining rooms.

(c) Remote from here a group of cottages for *women*, with extensive gardens for the raising of flowers, flower seeds, berries, bees, etc.

(d) A group of cottages for *men* next to the gardener's house. These are the men who work about the grounds, caring for the trees, lawns, hedges, paths and roads. The grounds will be made not only attractive, but instructive, for all trees and shrubs are to be labeled, and an effort should be made to establish not only a botanical garden, but a zoölogical as well.

(e) A school building should be provided for children of both sexes of tender years. It should be their residence as well, and the school conducted on the kindergarten plan.

(f) A large school building for each sex, containing not only school and recitation rooms, but rooms for studying music, drawing, designing, architecture, modeling, and the like, also rooms for teachers and some of the pupils.

(g) A museum, lecture room, library, reading room and gymnasium, with a swimming bath, might be advantageously combined in one building.

(h) A chapel.

(i) Stables for cows, sheep, pigs, horses, and dairy, with cottages for men detailed to see to the work required in this department.

(j) A farmer's house, with a group of cottages for men engaged in farm work.

(k) Shops. *For men*: 1. Tailors, shoemakers and saddlers in one building. 2. Carpenters, painters and glaziers, furniture makers and upholsterers in one building. 3. Blacksmiths, iron-founders, tinnerns and locksmiths in one building. 4. Printers, bookbinders, etc., in one building. *For women*:

Sewing-room, dress-making, millinery, fancy work, etc., in one or two buildings. Bedrooms may be combined with some of these buildings, the object being to scatter the residents as much as possible.

(*l*) A central kitchen, bakery, and store-room, combined with a cottage or two for the women who work here. From this central kitchen may be sent out to the various houses the chief articles of diet, which should always be simple—bread, mushes, milk, eggs, and various groceries, soups and meat once daily. Every cottage, however, should have its own dining room and small kitchen for reheating some foods and for light cooking.

(*m*) Laundry, wash room, ironing room, mending room, with a residence for those women who are occupied in this department.

(*n*) A pathological laboratory of the most recent design, fully equipped with everything requisite for good scientific work. This laboratory to be in connection with the mortuary and remote from other buildings. A cottage not far away, for the residence of the pathologist, would be necessary.

While I have endeavored to delineate as well as possible the needs of a model epileptic colony, there are many things not mentioned here that will develop with the gradual evolution of the colony. For instance, if the land is such that quarries exist upon it, or that brick may be manufactured, a new industry would arise requiring its particular cluster of buildings for work and residence.

The buildings that I have enumerated reach the figure of about thirty. The Bielefeld colony, with a thousand patients, had fifty-five buildings at the time of my visit several years ago.

With the exception of the observation and hospital building, none of the buildings need be specially planned to meet the wants of epileptics. They should be as much as possible like ordinary houses.

The ventilation should be by fireplaces and windows, as in ordinary town and country houses.

Each residence should have, if possible, a simple rain-bath, up-stairs dormitories and bedrooms, with a sitting room, small kitchen and dining room below.

It will doubtless be of advantage to make all buildings fire-proof.

All the buildings need not be constructed at once. A community of this kind can not be provided for in a moment. It must grow into a colony by a sort of evolution, its wants being supplied as they become manifest, through the intelligent direc-

tion of its superintendent and trustees. The inhabitants of this colony will in time be able to erect their own buildings as required.

And now a word or two as regards commitment. All patients under age can be sent by their parents, just as they would send children to boarding schools, transferring their parental authority for the time being to the officers and teachers of the colony. All other patients are to be voluntary denizens of the colony, except such as through mental impairment of any kind require confinement in the infirmary; and with these last the ordinary procedures taken in lunacy cases should be carried out, formally committing them to the infirmary of the colony.—*N. Y. Medical Journal*.

CHOLERA, ITS HISTORY AND TREATMENT.

By WINSLOW ANDERSON, M. D., M. R. C. P. Lond., etc.

During my travels in Egypt, India, China and Japan I frequently saw cases of cholera. The Syrian coast, including the Holy Land, was in a state of permanent quarantine during our visit in 1891. Bombay, Calcutta and Madras had many deaths from the disease every week whilst we were in them.

ETIOLOGY AND HISTORICAL SKETCH.

The term is first used in the Hippocratic writings and is believed to be derived from *chole*, bile, or cholera, a water-spout. Cholera is an infectious disease, but it can not be regarded as being contagious from man to man, as are small-pox and scarlet fever.

The *materies morbi* is present in the dejections, and it is by means of these that the water—the most frequent carrier of the disease—becomes contaminated. Milk also becomes contaminated either by washing the cans with polluted water or by introducing water into the milk.

In Japan the enormous fatality of cholera is undoubtedly due to their methods of raising garden stuffs. Dejections and refuse materials of all kinds are collected and carted to the fields, where they are suitably diluted with urine and water and then sprinkled on the growing vegetables once or twice a week. This produces a luxuriant crop of vegetables—and cholera, should the material become contaminated, as it often is, with cholera germs.

The first accurate knowledge we have of modern cholera dates from 1629, when Bontius, a physician of Batavia, described the disease. It was not, however, until 1817, when the terrible outbreak at Jessora cost 10,000 lives in two months'

time, that cholera was accurately described. From Jessora the disease spread to the coast of the Persian Gulf, to Burmah, Russia and Europe.

In 1831 it was conveyed from Mecca to Cairo by a caravan, and 15,000 died of it in that city. In 1836 40,000 deaths were caused by cholera in Great Britain. The same year New York and Philadelphia lost 8000 lives from it. In 1846 we find it raging in Teheran, Persia, killing 300 people daily for many weeks. In 1848 cholera again visited England, and over 53,000 died from it. The following year New York, New Orleans, Cincinnati, St. Louis and some Western States were visited by it. In 1855-6 the allied armies in the Crimean war suffered severely. In 1866 London lost in less than one month over 68,000 people from cholera. Russia records for 1871-3 a death roll from cholera that is truly appalling, it numbering 242,425 souls! In 1882 Egypt had a mortality of about 50,000 in a few months from the disease. In 1884-7 cholera depopulated France of about 15,000; Spain of 180,000; Austro-Hungary of 4000 and Italy of 50,000 lives.

The theory that San Francisco is too cold for cholera to flourish is not tenable, as the history of former epidemics shows that Moscow, Sweden and other northern countries suffered terribly from the disease in the depth of winter.

THE CHOLERA OF 1892.

Cholera has already left its oriental home, where it flourishes endemically and epidemically at all times of the year, and is now playing sad havoc in many parts of Europe. It is present to an alarming extent in Russia, as the official returns already show a mortality of over 100,000 souls! The disease has invaded Germany with its superior quarantine regulations. Many cases are reported in France, Italy and Spain, and England has again been infected. If the United States succeeds in keeping out this harbinger of death she will do better than any other nation has ever done. It naturally follows that cholera is almost certain to reach us, and we can not urge our health and quarantine officers too strongly to adopt every precautionary means in their power to keep the disease away.

San Francisco is to-day in a most excellent condition for the reception of cholera. Our sewers are simply filthy, stinking, disease-breeding cesspools, worse than no sewers at all, for filth and refuse oxidize, and become measurably inert in the open air and sunshine, but decompose and generate disease when allowed to stand in underground pools, choked up and broken down sewers. With the topography San Francisco enjoys, we could have the healthiest city in the world, if our sewer-

age system were constructed, flushed and maintained according to modern sanitary rules, and if the cholera visits our fair city and decimates our population we have none to blame but ourselves, or rather those into whose hands we have entrusted the health of the city. Therefore, let us look well to our sanitary condition before it is too late.

Repair and cleanse out our old rotten sewers, have them *flushed daily*, clean out cellars and yards, and keep our disgracefully dirty streets clean. Do not allow the dead carcases of cats and dogs to lie and *rot* in our public streets *as they do now*—in short, thoroughly clean and disinfect our city, and give us a fair chance to do battle with our greatest enemy on earth.

PATHOLOGY.

Lebert long ago formed the opinion that cholera was due to a germ, but it remained for Dr. Koch in 1884 to discover the comma bacillus, which is now generally accepted as the true cause of cholera. This is not, however, definitely settled as yet.

The bacillus is found in the rice water evacuations, and in the contents of the alimentary canal after death; it is shorter than the tubercle bacillus, slightly curved, and somewhat thicker in the middle than at the ends. These bacilli produce a toxic alkaloidal substance which is believed by the later investigators to be the active cause of death.

Rigor mortis sets in immediately and persists a long time, and decomposition proceeds slowly in those dead of cholera. The right heart is distended with dark, thick venous blood, and the lungs and mucous membranes are engorged with blood and purulent mucus, with here and there hæmorrhagic infarcts. The intestines in the earlier stages contain the well known *rice water* fluid. In the later stages the liquid becomes greenish. The mucous membrane is everywhere engorged and bright rose-red in color. Peyer's patches are swollen at first and shriveled up and abraded toward the last. The spleen is uniformly small. The kidneys are large and show proliferation of the renal epithelium, which chokes the tubules, undergoes fatty degeneration and causes suppression of the urine.

The diagnostic points to be observed from the urine are of great importance in doubtful cases. They are: in true Asiatic cholera the urine (*a*) contains albumen, (*b*) absence of chlorides, (*c*) contains an excess of uroxanthin. Not any of these conditions appear in cholera nostra or cholerina.

SYMPTOMS AND CAUSE.

The period of incubation is about two days. It may be only a few hours, and it has been known to be several days.

The prodromal stage is often followed by an ordinary diarrhœa, headache, vertigo, and epigastric uneasiness. In a few hours to a few days the patient is seized with severe cramps in the calves of the legs, in the feet and in the hands. Then follows violent diarrhœa, with the characteristic rice water stools. These stools are usually so copious that many gallons pass in a few hours. Soon the vomiting sets in, and this is, perhaps, the most distressing of all the symptoms, next to the terrible cramps. The patient will soon sink into the stage of collapse, the surface of the body becomes cold and livid. The eyes become sunken and the cornea cloudy. The breath is cold and the end is near. The temperature in the axillæ falls to 92 deg. Fahrenheit, 88 deg. Fahrenheit, and even 72 deg. Fahrenheit, whilst in the rectum the thermometer often records 105 deg. Fahrenheit. The patient lies motionless and apathetic, except when tormented by cramps. The pulse becomes weaker and weaker and about 100 per minute. The respirations are short and rapid, about 40 per minute. The voice becomes hoarse and sinks to a whisper. Usually the collapsing stage begins about seven hours after the vomiting and purging set in, and death may supervene in from 12 to 24 hours. Indeed, many cases fall down in the street and die in half an hour without any purging or vomiting. If a patient survives twenty-four hours he is in a fair way to recover. The mortality varies from 35 to 70 per cent. in different epidemics. In India the mortality among the natives is much less than among the Europeans—being 45 per cent. in the former and 60 to 70 per cent. in the latter.

PROPHYLAXIS.

When it is remembered that cholera is a preventable disease one marvels that more is not done to prevent its ravages. As the cholera germs gain their entrance into the system through the alimentary canal, it becomes of vital importance to secure pure food and water during epidemics. This can be accomplished, as is the custom in India, by *thoroughly boiling every particle of food and drink* taken into the stomach. With this precaution one need not be afraid of the cholera.

It has been found that the cholera germs can not live in the acid gastric juice nor in other acid fluids, but thrive in the alkaline juices such as we find in the stomach during the interim of digestion and in the intestinal secretions. It therefore becomes important to take acid drinks, ripe acid fruits and frequent meals during an epidemic to render the gastric juice acid.

Too much importance can not be attached to the burning and thorough disinfection of infected clothing, cholera stools,

etc., in fact, everything connected with a cholera patient, for it has been demonstrated that the spores of the bacilli may lie dormant in the earth for months and years and multiply and spring into new life and activity under favorable conditions.

Rags and clothing should be burned; merchandise, and even letters and papers, should be thoroughly disinfected in superheated chambers, or with chlorine or sulphurous acid gas.

The treatment of a patient stricken down with cholera must be prompt and energetic to be efficient. The horizontal position must be observed, clear out the alimentary canal with a large dose of calomel followed by castor oil. Astringents and opiates are of doubtful service. Germicides, such as the bichloride of mercury, carbolic acid, turpentine, dilute sulphuric acid, etc., are of much more value. Hypodermic injection of the bichloride of mercury has been of service. Cold champagne has proven of great value in checking the vomiting and supplying stimulation. Ice to suck and carbonated waters are useful.

In the collapsing stage subcutaneous injections of strychnine, alcohol, nitrite of amyl, ammonia, ethe, etc., are of undoubted value, but the treatment of most service and the most successful in saving life is to place the patient in a hot water bath of the temperature of 104 deg. F., and as soon as the collapsing stage approaches give 10 oz. of the following saline solution by means of the Aveling syringe, *intra venous*:

℞ Sodii phosphatis.....	gr. ivss.
Sodii carbonatis.....	gr. xxviij.
Sodii chloridi.....	dr. jss.
Potassii chloridi.....	gr. viijss.

M. Dissolve in 40 oz. of warm water. Of this saline solution use 10 oz. for each *intra venous* injection at a temperature of 99 deg. F.

Repeat in from half an hour to two or three hours, if necessary.

Cholera dehydrates the blood so rapidly that unless some active measures are adopted at once by which the blood can regain its fluidity death must inevitably result, and this saline solution injected into the cephalic vein promises the best possible results in conjunction with the line of treatment indicated.
—*Pacific Medical Journal*.

STRYCHNINE IN THE TREATMENT OF CHRONIC ALCOHOLISM

In 1888 appeared a short article by Portugalow-Samara (*Nedelja*, No. 8), in which this writer claimed wonderful success in the treatment of chronic alcoholism by the hypoder-

matic use of strychnine. The article attracted little attention except in the Russian journals, and nothing further on the subject has appeared until the recent paper of Jergolski (*Wratsch*, No. 10, 1891). This author reports a series of ten cases treated by this method, with gratifying results. A marked example was that of a joiner, æt. 42, who had for ten years drunk daily a half to one litre or more of brandy. The first day of treatment he received a hypodermatic injection of one-fortieth grain of nitrate of strychnine.

Upon presenting himself the next day, he reported that he had had no restlessness or dragging at the stomach, and had not touched a drop of liquor. One-twentieth grain was injected on this and the seven subsequent days, and he was then dismissed with one grain of the drug in sixty pills, which were to be taken one a day every alternate week. At the end of fifteen months the patient reported himself completely cured. The other nine cases were similar to this, and in all some good effects were noted—in the majority a permanent cure—though in several a relapse occurred from various causes. Portugalow-Samara follows with a report of 455 cases of cure since his first experiments in 1887. According to his experience, ten to fifteen daily injections are required.—*University Medical Magazine*.—*Canadian Practitioner*.

WHOOPIING-COUGH: TREATMENT BY ONE OF THE NEWER METHODS.

By DR. J. T. DUNCAN, Toronto, Professor of Anatomy in the Woman's Medical College, Toronto.

The treatment of whooping-cough has never yet been perfectly satisfactory; has been, indeed, decidedly unsatisfactory. Many different medicines have been tried, some of them vaunted for a while, and then consigned to oblivion. And the long list of remedies is being constantly added to. Every year brings forth new specifics. Probably every practitioner present has made trial of these new remedies. The consensus of professional opinion is fairly set forth in the latest published book on the practice of medicine—I select one bearing the date 1892—that splendid work by the man who stands in the very forefront of his profession; a man whose name is a synonym for all that is best and most advanced in the treatment of disease; a man of whom all Canada is proud—I refer to Dr. Osler, of Baltimore. We may accept the utterance found in this work as embodying the opinion of the profession on this subject. On page 87 are the following words: “The medicinal treatment of whooping-cough is most

unsatisfactory. Like other infectious disorders, it runs its course practically uninfluenced by drugs. * * * For the paroxysmal stage a suspiciously long list of remedies has been recommended, twenty-two in our popular text books on therapeutics."

But granting the truth of this remark, that up to the present time no drug has been found to influence the course of whooping-cough to any extent, this does not prevent the hope that some means may be discovered. Speaking for myself, however, I may say that having tried a number of the new remedies as they appeared, and without much success, I had grown skeptical in regard to them. Therefore when, more than a year ago, I first saw mentioned the drug of which I am to speak to-day, I did not consider it worth while to try it. But last January, first in that valuable publication, the *Medical Annual*, published by Wright, of Bristol, and afterward in the weekly epitome of the *British Medical Journal*, the drug bromoform was highly spoken of in the treatment of pertussis.

Having then a serious case on hand, I determined to try it. I will now give the brief record of five cases in the order of their occurrence treated by bromoform.

CASE 1.—This was a delicate boy, æt. 4½ years. In February of this year he began to cough, and from the 11th to the 29th he was under the treatment recommended by Quani, viz., chloral hydrate, but without much improvement. The cough was so troublesome at night, the attacks being nearly one an hour, that the boy's father sometimes sat up till 6 o'clock in the morning with him. On the 29th of February I ordered bromoform mij to iij to be given in a teaspoonful of water three times a day. The night following the first day's administration was only marked by two paroxysms. Not only was the coughing thus reduced, but the vomiting, which had been severe, was rapidly lessened. On March 2, three days after getting this treatment, he was reported improved in every respect, and on March 4 as "much improved." From this time the improvement was rapid, and on March 8 he was stated to be "almost well." Shortly after this, however, partly because the slightly remaining cough was no trouble, and partly from a strange fear of the medicine, he only received it about once a day. During the first two weeks of April he received none whatever, and the cough and vomiting returned. Bromoform was ordered again, and at my last visit, at the end of April, the cough was so slight as to be scarcely noticeable, appetite good, and he was gaining in flesh.

CASE 2.—Girl, æt. 4. In this case the paroxysmal stage began about the middle of March. They were described by the

mother as "very bad." Not very numerous, perhaps 15 in 24 hours; they were yet so severe as to cause fainting on several occasions, while vomiting took place with every paroxysm. She was said to be getting constantly worse. On the 30th of March I was asked to see her, and at once ordered bromoform *mij*, as in Case No. 1. The mother could not obtain the drug for some days, as it was not kept in all the stores. But after obtaining it reported a decided improvement in three days. The cough and vomiting lessened, and the vomiting entirely ceased in ten days after taking the first dose. The appetite also improved as the cough lessened. The cough entirely ceased about April 25.

CASE 3.—Boy, *æt.* about 5 years. In this case, the whoop began about March 25. It seemed a mild case. Bromoform was ordered as before. The boy was sent to Muskoka, and I can only report that his friends told me he had little trouble.

CASE 4.—Girl, *æt.* 2 years. Paroxysms began in the first week in April, occurring in about every two hours, vomiting every time. She was losing her appetite. Here the medicine seemed to check the trouble at once. She was so well by the middle of April that the medicine was stopped. At the end of April there was an occasional cough remaining, but it gave no trouble.

The last record I can present is that of a baby.

CASE 5.—Girl, 7 months old. The paroxysms were present for about a week before I saw her. Cough occurred ten or twelve times a day, appetite was almost gone; she was losing flesh. *Mj* was ordered three times a day. This was tried for four or five days without the slightest improvement. The dose was then increased to *mij*. Improvement was noticed the second day after receiving the larger dose. The paroxysms lessened in number and severity, and the appetite returned quickly to its excellent normal state. An occasional rather worrying cough still remained at the end of April.

Such has been my experience with this drug. Allow me briefly to refer to that of others. Dr. Stepp seems to have used it in 1890, and claimed great success with it. Dr. Lowenthal next used it, and in the manner recommended by Dr. Stepp, *viz.*: in doses of 2 to 5m three or four times a day. He says that it exerts an almost specific action upon whooping-cough, at least if used early. One hundred cases were treated, *æt.* 8 weeks to 7 years. As a rule the good effects began to show themselves on the second or third day, the vomiting being arrested within a week after commencement of the treatment. Complications ran a favorable course, and, where there were relapses, a return to the bromoform soon arrested the symptoms.

In the weekly epitome of *Current Medical Literature*, published as a supplement to the *British Medical Journal*, is this summary (September 19, 1891): Stepp has treated 100 cases, Lowenthal 100, Neuman 25 and Scheppers 250.

The results may be thus stated: (1) Bromoform in the doses stated is a perfectly harmless remedy. (2) The attacks diminish in number and severity. (3) The first paroxysmal vomiting disappears in two or three days. (4) Nasal and other forms of hæmorrhage soon disappear. (5) It acts beneficially in complications, largely by giving affected organs, *e.g.*, lungs, a chance to rest. (6) It undoubtedly shortens the duration of the attack (Stepp, 2 to 4 weeks; Scheppers, 8).

Bromoform is a heavy sweetish liquid. It is best given dropped in a teaspoonful of water. Given thus, children like it; but be sure the drops are swallowed, as they sink through the water on to the spoon. It must be dispensed in small amounts, and kept from the light, as it is apt to change.—*Canadian Practitioner*.

YELLOW FEVER, BEFORE AND AFTER THE DISCOVERY OF AMERICA.

By CHARLES FINLAY, M. D., Havana.

The early history of yellow fever has for a long time been shrouded in mystery. Some authors, upon very slender grounds, attributed its first authentic appearance on this side of the Atlantic to an importation from Africa, through the slave trade. Others attempted to identify it with diseases described in the Greek, Roman, or Arabic writers of ancient and mediæval ages; a theory which Dr. Joseph Jones, of New Orleans, has taken the pains to exclude in reviewing all the epidemics mentioned in the European literature of those days. Finally, a third group, among whom we find Dr. Stanford Chaillé, who presided, in 1879, over the United States Yellow Fever Commission, inclined to the belief that our present yellow fever is no other than the pestilence which decimated the Spanish colonists or invaders upon their first arrival at Santo Domingo, Darien, Nombre de Dios and Vera Cruz ever since the days of Columbus, and which is mentioned under the names of *peste* and *pestilencia* by contemporary Spanish chroniclers. It was not, however, until seven or eight years ago that light began to be thrown upon the subject. Dr. Bérenger-Féraud, in Paris, and the writer of this paper, in Havana, without any knowledge of each other's researches, both presented about the same time a collection of historical data tending in each case toward the same conclusions. Those formulated in

the two papers read by the writer before the Havana Academy of Sciences may be thus summarized :

1. Before the discovery of America by Columbus, yellow fever was endemic upon the Atlantic coast of New Spain (at Vera Cruz in particular) and of Terra-firma (Darien, Nombre de Dios). In these localities the disease was probably perpetuated through the communications with the colder and more elevated inland regions, whence the arrival of susceptible subjects might enable the morbid agent to be incessantly reproduced.

2. The Carib Indians of the West Indian Isles, during their frequent excursions to the coast of Terra-firma, where they are supposed to have procured their arrow-poison, must have picked up the germs of the *peste* and carried it to their respective islands, developing new epidemics among such subjects as were at hand and liable to contract the disease.

3. In the island of Santo Domingo (Hispaniola), excepting, perhaps, in its southern province of Higney, occasionally visited by the Caribs, no invasion of the pestilence had probably occurred within several years previous to the discovery. Columbus appears to have become "acclimated" through an attack contracted on board of his vessel in 1494, on the coast of Higney. The first general epidemic, however, only broke out in Hispaniola in the year of 1495, when it destroyed the majority of the Spaniards and also one-third of the indigenous population. After that occurrence the disease must have taken a permanent footing on the island, continuing thereafter to exhibit the same alternations and to produce the same immunities that it does at present in these islands.

4. The island of Cuba, notwithstanding its proximity to the point of infection, enjoyed a remarkable exemption, due, perhaps, in some measure to its milder climate, during the first hundred years that followed its colonization in 1511. In 1620, many deaths occurred in Havana, from June to November, in consequence of "pernicious or malignant fevers," which also attacked the shipping, having been, probably, imported from Terra-firma or Vera Cruz by the "*flota de Indias*." In 1649, the pestilence was again introduced and extended over the whole island, destroying one-third of its inhabitants. Its ravages were renewed in the succeeding years until 1655. After that date the disease may have persisted in a milder form, attacking now and then susceptible subjects and occasioning the death of some foreigners of note, but the nature of the malady was not recognized. In 1761 the disease now characterized as "*black vomit*" was definitely imported from Vera Cruz, and since that time a series of circumstances, such as the occupa-

tion of Havana by the British forces, the opening of the port to general commerce, and the continuous arrival of immigrants from Spain, have combined to make of Havana an endemic focus where the disease has been prevailing with variable intensity, according to seasons and years, over a period of 130 years.

The amount of evidence brought forward in support of the above conclusions was considerable, but it could not be denied that it was mostly of a "presumptive" kind, no account of the disease having been obtained previous to those of Du Tertre (1648) and Labat (1695), in such terms, at least, as to enable its clinical features to be recognized.

In the course of the past year, while reading a philological study on the names of "America" and "Yucatan," by the learned Bishop of Yucatan, Dr. Crescencio Carrillo y Ancona, the writer came across a remarkable phrase in a quotation from one of the "Chilam-Balam books." These are older calendars or chronicles of the Yucatan Indians, written in the "Maya" language for the purpose of recording the principal events that affected their people. The Rev. Bishop Carrillo is known to possess a rare and valuable collection of those books, and is considered an authority on that important philological subject. His quotation from the "Chumayel manuscript" contained the following words: "There was black vomit which began to occasion deaths among us in the year 1648," a statement which immediately suggested the idea that among the Indian manuscripts of Yucatan might be found the evidence that was wanted to prove that yellow fever was not unknown to the American Indians before the discovery. Accordingly, in the month of March of the present year, the matter was submitted to the Rev. Bishop himself, acquainting him with the state of the question and begging for information on the following points:

Whether, among the Maya documents that he had examined or in the course of his other researches, any data had been met confirmatory of the writer's own conjectures or throwing light on the subject of the epidemics called "cocolitzle," which, according to Herrera (*Decada IV., Lib. IX., Cap. VI.*), used to attack the Mexican Indians on the coast of New Spain before the arrival of the Spaniards.

In answer to this request, the Rev. Bishop, with great courtesy and condescension, has written a most interesting and instructive letter, containing a full discussion of the subject and valuable data not to be found in our current literature. It is the substance and partial reproduction of this important communication that the present article is intended to make known for the benefit of the readers of this journal.

After proving, upon the best testimony, that Yucatan, until the year 1648, had been pronounced by all the Spanish writers a most salubrious country, exempt from the diseases that prevailed in other places, no epidemic of any kind having been observed in it from the commencement of the Spanish colonization in 1517 until 1648, the Rev Bishop Carrillo concludes that the disease called "*cocolitzle*" by the Mexicans, and which prevailed annually at Vera Cruz before the Spanish invasion, did not habitually manifest itself in Yucatan. Regarding that disease, he calls attention to the circumstance that, from Herrera's own account, it is easily seen that a distinction was made by the Mexicans between the local endemic, properly designated under the name of "*cocolitzle*," and a broader application of the same term, qualified by some expletive such as "general" or "universal" whenever it was used to designate other epidemic invasions that extended over the whole country, as subsequently happened with small-pox. The local endemic, the *cocolitzle* proper, existed at Vera Cruz, "some years more violent than others;" and the reason why the Spaniards found so large a population on that coast was that, on occasions when their "*cocolitzle*" had been particularly severe, Montezuma used to send 8000 families from the interior to repeople the coast, exempting them from taxes during a term of years and granting them other privileges. This "*cocolitzle*" may, therefore, have been yellow fever, but, at any rate, it did not occur in Yucatan between the years 1517 and 1648. He next goes on to prove that the epidemic of 1648, alluded to as "black vomit" in the "*Chumayel manuscript*," was in reality yellow fever; and does so very effectively by reproducing a most remarkable description of that epidemic by an eye-witness, the Yucatan historian, Fray Diego Lopez de Cogolludo, who was himself attacked by the disease. This account is so graphic, so rich in sagacious remarks, and so accurate in its clinical details, that it well deserves to be given here. It runs thus:

"1648. Shortly after the commencement of the solar year, in the month of March, the sun appeared for several days as if eclipsed, the air being so thick that it had the appearance of a mist or condensed smoke. This was so general that every part of the land, from Cozumel to Tabasco, offered the same unwholesome condition. . . . In the city of Merida, especially toward evening; when the wind generally sets from the sea, a bad smell was brought with it that could scarcely be borne, and penetrated everywhere. The cause of this smell was unknown until a Spanish vessel happened to run aground over an immense heap of dead fish near the shore. It was

from these fish, which were being washed ashore by the tide, that the smell had proceeded, extending as far as the city, and even beyond. In April and May some sudden deaths occurred, which caused alarm in the city of Merida. At the beginning of June the scourge of the *peste* commenced in the town of Campeche, and in a few days became so severe that the place was completely ravaged. . . . The roads to Campeche were guarded for fear the contagion should spread, but if the Lord guards not the city what shall human efforts avail! With this fear of Divine justice the month of July passed, until toward the end a few persons began to sicken, dying very soon; but the disease was not considered as epidemic until the month of August. With such violence and rapidity were the people attacked, big and small, rich and poor, that in less than eight days the whole population of the city were sick at the same time, and many citizens of the highest rank and authority died. . . . While the city was thus afflicted by this calamity, *never before seen since this country was conquered by the Spanish nation*, permission was asked that the image of Our Lady of Itzamal might be brought. . . . Very great was the tribulation, *such a calamity having never been experienced before*. . . . In other countries epidemics occur as a common evil which attacks uniformly all the people, but such was not the case in Yucatan, which caused greater confusion. *It is impossible to say what the disease was, for the physicians did not recognize it*. In most of the cases the patients were taken with a most severe and intense headache, and pains in all the bones of their bodies, so violent that their limbs felt as if torn asunder or squeezed in a press. A few moments after the pains came on a very intense fever, which in most instances produced delirium, though not in all. This was followed by vomiting blood, as if putrefied, and of such cases very few survived. Some were attacked with discharges from the bowels of a bilious humor (*humor colico*), which being corrupt occasioned dysentery without vomiting, while others again made violent efforts to vomit without being able to discharge anything, and many suffered the fever and pains in the bones without any of the other symptoms. . . . In the majority the fever seemed to remit completely on the third day; they would say that they felt no pains whatever, the delirium would cease, the patients conversing in their full senses, but they were unable to eat or drink anything; they would continue thus one or several days, and while still talking and saying that they were quite well, they expired. A great number did not pass the third day, the majority died on the fifth, and very few reached the seventh, excepting those who sur-

vived, and these were mostly advanced in years. The most robust and healthy of the young men were most violently attacked and died soonest. . . . Although a great many women were taken sick the disease was less severe in them than in the men. . . . Some cases occurred in which the patients passed the fever in a sleep, until they recovered, having had no one to administer remedies to them. In houses of large families there was scarcely any one to attend to the sick or to fetch the sacraments for them. This spiritual difficulty was remedied by the charity of the priests, both secular and regular, who went about the streets by day and night carrying with them the Holy Viaticum and the Holy Oils, and visited the houses to administer the same to such as required them. . . . When the laity began to improve, the disease broke out among the priests. Of eight members of the Jesuits' College six died. . . . Of our own order (Franciscans) twenty died in the city. Almost all the heads of institutions and persons of highest rank, both ecclesiastics and seculars, were carried away by that epidemic. . . . While it lasted in its full intensity among the Spaniards, the Indians were not attacked, excepting those that lived with the former, or who, having visited the city, left it already touched by the disease; most of these died in their villages, but did not communicate their illness to those who attended them. This emboldened the Indians to declare that the scourge was a punishment of God, and that only the people of cities and towns were attacked for their ill-treatment of the Indians. . . . A deceitful Indian spread the report that all the Spaniards in Yucatan would die and the Indians would be left by themselves. . . . Finally, this man was taken up and the rumor ceased. . . . Soon, however, did Our Lord undeceive the Indians of their presumption, for a few days after the above occurrence the same illness broke out in many of the Indian villages, causing fearful havoc, as was to be expected, considering their want of comforts or medicine. The disease continued over the whole country during the space of two years. . . . Few that lived in this land or visited it in the course of those two years escaped being sick, and it *rarely happened that any one died of a second attack after having recovered from the first*. All remained pale as ghosts, without hair, many lost their eyebrows, and all were so pulled down that even after a two-days' fever with moderate pains (such as happened to myself), it was many days before they would recover their strength. . . . In the year 1650, on our way to visit the province of Guatemala . . . having to pass through an extensive pine wood, . . . we observed that since the

year 1648, in which the epidemic had commenced, some pestilential air or other noxious influence had dried up all the full-grown pine trees, . . . only the young ones remained with life. I then reflected that of the young children who were attacked by the *peste* in Yucatan only very few had died, as compared with the adults." (Cogolludo-Historia de Yucatan, Libro XII, Capitulo XII, XIII, XIV.)

The Rev. Bishop, after this quotation, remarks: "The Spanish historian, finding himself at a loss to classify or to name the curious malady which, after the lapse of over a century, the Spaniards of Yucatan came to suffer, is obliged to give a minute account of its symptoms and circumstances; whereas, the 'Chumayel manuscript' only needs one single word, both graphic and appropriate, in order to record the occurrence of the epidemic, by its special name, in the corresponding chronological note which it has been my good fortune to give to the learned world in the fac-simile that accompanies my 'Philological Study on the names of "America" and "Yucatan"'—Uchci xékik hoppci cimil toon 1648 años—which means: 'There was black vomit, which began to cause deaths among us in the year 1648.'"

"Even without knowing the Maya language, read carefully that line of the text and observe the second word, 'xékik.' In the Dictionary of Don Juan Pío Verez you will find it rendered by 'vomito prieto, vomitar sangre' (black vomit, to vomit blood). The words that follow mean: 'And we ourselves began to die'—referring to the Indians; for which reason Cogolludo has said that at the commencement of the epidemic only the Spaniards were attacked, but subsequently the Indians also began to suffer."

This philological demonstration must be continued in the Bishop's own words:

"Notwithstanding that from this statement alone of the 'Chumayel manuscript' I infer that the 'vomito negro' was known to the indigenous historians, though new to the Spaniards of Yucatan, this would only constitute a conjecture, more or less grounded; whereas, what is required, as you say, is a *decisive fact*. This brings us to the essential and culminating point of the present letter.

"The 'Maya manuscripts' that I possess, like all the sacred books of the ancient '*Yucatecos*,' or 'Chilam-balam books' as they are vulgarly known, have precisely for their principal object the recording of chronological notes concerning their feasts to their gods, wars, pestilences, famines, and invasions by the Spaniards. They are chronicles and calendars. I therefore proceed to examine them, more particularly

in such parts as concord with the 'Chumayel' regarding the seventeenth century and the occurrence of the great epidemic, and find the following conclusive statement in the 'Tzimin manuscript' (which I have so named because it proceeds from the Tzimin Indians [Tzimincah]), between the folios 16 (verso) and 17:

"'Can ahau u buluc ñit katun cu xocol tu Chichen Ytzá u heo katun ulom kuk, ulom Yaxum, ulom Ah Kantenal, ULOM XEKIK TU CAN UAO, ulom kukulcan tu pach ah Ytzaob, tu canten u than katun uale.'

"In English: 'In the 4th ahau (year of the Mayas), at the expiration of a katun (*their century*), which is counted toward the well of Chichenitzá, at the placing of the stone katan, arrival of Kuk, arrival of Yaxum (*mythological and historical characters who gave their names to the epochs*), arrival of Kantenal, OCCURRED THE ARRIVAL OF BLACK VOMIT FOR THE FOURTH TIME, arrival of Kukulcan, after the Ytzaes, at the fourth placing and signification of the katun.'

"This statement throws much light on that of the 'Chumayel,' for, in speaking of the same epidemic corresponding to the year 1648, it says most positively that *it was the fourth time* that it had visited this country; and considering that since the discovery in 1517 until the said year of 1648, in which the epidemic broke out, it had never been seen by the Spaniards, it must follow that the three previous invasions had occurred before the discovery.

"So true is this that the same historians whom I have quoted before to prove the constant healthiness of the climate of the Yucatan peninsula, and that *in it were not experienced the diseases that occurred in other lands*—all are equally agreed in stating that great epidemics had been suffered in Yucatan before the discovery, thereby confirming the words in the 'Tzimin manuscript.' The Rev. Fray Don Diego de Landa, who, it must be remembered, was a missionary in Yucatan during the first epoch after the discovery, expresses himself in the following terms:

"'Various calamities experienced in Yucatan *in the century before the conquest*; hurricane, *pestilences*, wars, etc. . . . There came over all the land *certain pestilential fevers*, which lasted twenty-four hours, and after they ceased the patients would swell and break out full of worms, and from *this pestilence* a great number died and a great part of the crops could not be gathered; that after the epidemic had ceased they had a period of sixteen good years, during which their quarrels and dissensions were renewed, so that 150,000 men were killed in wars, after which they were quieted,

made peace, and rested during twenty years, when they were attacked by a *pestilence* of large boils, which rotted their bodies with great fetidness,* so that their limbs would drop off in pieces in the course of four or five days.' (Landa, *Relacion de las cosas de Yucatan*.—Año de 1566.)

"The same account is given by Herrera (*Decada IV, Libro X, Cap. III*) and other historians, and it must be particularly remembered that the Rev. Bishop Landa had at his disposal a great number of 'Maya manuscripts,' painted skins, and other historical relics of the Yucatan people; a notorious fact, which is attested both by his important work, just quoted, and by the accusation brought up against him of having burned such documents in the *auto da fé* that took place at Mani.

"I hold, therefore, as sufficiently proven and for a certain and unquestionable fact, that the Indians of Yucatan suffered from the '*vomito negro*' as an epidemic, before the discovery, and consequently that yellow fever is a disease properly belonging to America.

"There is another statement, though only of an accessory character, in the 'Maya manuscripts,' which I find in the 'Prescription Books of the Indians,' of which I possess several ancient copies, in the Maya language. In almost all the following prescription appears:

"'U ɔacal xékik;' that is, 'medicine for the vomiting of blood;' and there is one that seems expressly written in terms that leave no doubt as to whether it applies to any kind of vomiting of blood distinct from the *black vomit* peculiar to yellow fever. It says:

"'U ɔacal xékik ti unic, ma hach chaci, maix kiki bay u kab yabacná,' which means 'medicine for the vomiting of blood for persons who discharge it; not properly of a red color, nor resembling real blood, but like a liquid mixed with soot.'

"If you will notice the last word, 'yabacná,' and consult the dictionary of Don Juan Pio Peres, you will find that it is rendered by 'Hollin,' which in Spanish signifies 'a black substance, thick and oily, which the smoke leaves in chimneys.' So that 'kik bay yu kab yabacná' means 'black blood like an infusion of soot.'"

Thanks, therefore, to this unexpected application of the Rev. Bishop Carrillo's extensive philological and bibliographical learning, the vexed question of the origin of yellow fever and the true nature of the early epidemics experienced by the Spaniards, on their arrival in these parts of America, ever

* "As these boils could not be attributed to small-pox, which is known to have been introduced by a negro who came with the Spaniards, it is credible that they were the consequence of the epidemic fever or yellow fever."

since the days of Columbus, may be considered as definitely settled.

Notwithstanding that the chronological system of the Mayas and the concordance of their dates with our Christian era are but imperfectly understood, the learned bishop, in a subsequent letter, informs me that he has other grounds for his assertion and absolute conviction that the epidemic of black vomit referred to in the "Tzimin" manuscript is the same that we find recorded in the "Chumayel" under the date of 1648. He writes: "Although the quotation from the 'Tzimin' manuscript does not contain the date (expressed in years of the Christian era), it fortunately happens that the book commences its chronological notes with the year '1593,' so written in the hand of the Indian author and with the same figures that we now use (folio 1, line 2). If we follow the text, page after page, and without omitting a single word, it is observed that no *invasion* of 'vomiting of blood' is recorded until folio 17 is reached; here the author for the first time mentioned such an invasion, adverting that it was the *fourth* that had occurred. Now, as it is a proven fact that after the year 1593, and even since the discovery of Yucatan in 1517, no epidemic of *black vomit* had occurred until 1648, to this same year must correspond that *fourth epidemic* mentioned in the 'Tzimin' manuscript, and the three previous ones must have taken place before the year 1593, at which that chronological record begins.

"If the 'Tzimin' text does allude to 'black vomit' or yellow fever, before the invasion which the author qualifies as the *fourth*, he does not in a historical sense, but as a calamity to be dreaded in evil times. It must be remembered that these 'Chilam balam books' are calendars which not only contain chronological and historical notes, but also predictions that in a prophetic style had been made in their ancient times. This one, for instance, is a literal translation from the same 'Tzimin' manuscript: 'At the end of the 2d ahau . . . it will happen that the people will have to seek laboriously for food as far as the shores of the sea, eating the young leaves of plants, and with the setting of the *katun*, days will come when great *vomiting* of blood will afflict the people, and all joy will cease; then, in order to find food, it will be necessary to solve enigmas that will be proposed; and after those troubles are passed, after the *katun*, days of consolation will come.'

"The fact that the Indians introduced in their prognostics of evil days the threat of 'vomiting of blood' is another proof that the disease had been well known to them since a long time, and precisely under its epidemic form, not as the epidemic that it has now become."—*Climatologist*.

ANTICYLIC ACID—A NEW ANTIPYRETIC.

Müller (*Correspbblatt f. Schweizer Aerzte*, August 15, 1891), of Tokio, recommends anticylic acid as an active antipyretic. It is a white, fragrant powder, with a refreshing, acid taste, readily soluble in water, alcohol and glycerine, and is non-toxic. In a solution of 1 : 10,000 it is destructive of even the most resistant organisms. The solutions are clear and do not injure instruments. Administered internally in doses of gr. $\frac{1}{100}$, anticylic acid proved exceedingly useful in cases of pneumonia, typhoid fever and articular rheumatism.

 SURGERY.

THYROTOMY FOR PAPILLOMA OF LARYNX, WITH RECOVERY OF VOICE.

By ALFRED AUSTIN LONDON, M. D. (Lond.), Lecturer on Forensic Medicine and on Clinical Medicine in the University of Adelaide, and Honorary Medical Officer Adelaide Children's Hospital.

JOHN G. M., æt. 3, was admitted into the Adelaide Children's Hospital on October 3, 1887, with the following history: Before he had been weaned, and whilst still under one year of age he contracted whooping-cough, at least his mother believes that he had whooping-cough, although, as he had no medical attendance, this point can hardly be considered established with certainty; when 18 months old he was scalded severely on one of his legs, but was well again after a couple of months. Soon after this (*i. e.* about a year before admission) it was thought that he had caught cold, as his voice had become weak and altered in character, though not exactly hoarse. Slowly and imperceptibly his voice died away, so that at last he could only speak in a whisper; and it was noticed that when he lost his temper and was shedding tears he uttered no sound, but used to run to a sofa and lie down until his inarticulate rage had ceased. At first there was neither cough nor dyspnœa, consequently no particular attention was paid to his ailment till about early in September, 1887, when his parents began to be anxious on account of severe paroxysms of dyspnœa, setting in usually at night-time. Whilst sleeping quietly he would suddenly wake in a fright and stand up in his bed, become livid, and perspire profusely; the paroxysm might last a minute or less, and a drink of water would very likely make him comfortable; he was comparatively free from these attacks during the day; he had never had diphtheria,

and the family history was good. In appearance he was the picture of health, as his photograph, taken shortly afterward, attests. On admission he was quite aphonic, speaking only in a weak whisper, and the same night he had some paroxysms which induced the house surgeon (Dr. Nesbitt) to telephone for me to come up and perform tracheotomy, but on my arrival I did not think the dyspnœa sufficiently urgent to warrant this. The following evening (October 4) he was bad again, and under chloroform I opened the trachea low down. The insertion of the tube was not followed by that immediate relief one is accustomed to observe in operating for diphtheria, but a gradual improvement occurred, so that at the end of a fortnight it was noted that he could breathe quite easily; and although he still had eight or ten paroxysms in the course of the day, he could dispense with the tube for some hours at a time. This improvement, however, was not maintained, for a fortnight later the removal of the tube for cleansing merely was attended with considerable distress and lividity, and it had to be worn permanently.

From November, 1887, to April, 1888, he was running about the hospital, being purposely kept under observation; his condition varied but little; on the whole he gained slightly in weight, and suffered no inconvenience except when the tracheal tube was temporarily removed for cleaning, when he used to become rapidly asphyxiated, it being noticeable that the dyspnœa was always inspiratory, not expiratory. Repeated examination of his thorax revealed no physical signs of disease, and a cough which had been a troublesome sequela of the tracheotomy gradually disappeared, so that very little mucus was expectorated through the tube; he was too timid to allow a laryngoscopic examination, and in February an attempt by Dr. J. C. Verco and myself to see the windpipe under chloroform was futile on account of the frothy mucus in the throat; a finger passed into the throat detected nothing, and a probe passed through the tracheotomy wound and the glottis met with no obstruction.

I at last decided to explore the larynx by thyrotomy, and accordingly on April 17 I operated, with the assistance of my colleagues, Dr. Way and Dr. Alfred Wigg, chloroform being administered through the tube by Dr. Cookson, the then house surgeon.

An incision was made in the middle line from above the hyoid bone to within a quarter of an inch of the tracheotomy wound. The thyroid cartilage was exposed and its notch defined, the hæmorrhage being but slight. Next the thyroid cartilage was divided vertically, when bleeding from the interior

was free; and on separating the alæ with blunt hooks a villous growth was protruded, reminding one very much of a sea anemone. This portion, which, on passing a probe around its attachment, appeared to spring from the right side, was removed with forceps and small scissors, whereupon a fresh portion of growth popped out, and was in like manner removed, and so on until the whole space exposed by the incision was cleared out. A 10 per cent. solution of chromic acid was then applied, the thyroid cartilage united by one fine silk suture, and the skin incision by several horse-hair sutures. Though not actually difficult, the operation was most tedious, owing to the interruptions for the administration of chloroform, for the stoppage of hæmorrhage, etc.; it was also difficult to inspect thoroughly the interior of the tiny larynx. The irritability of the mucous membrane appeared to be lessened by painting with a solution of cocaine, and as the head was dependent no blood ran down the trachea, the frothy mucus coming from the tube not being at all blood-stained. The growth proved to be an ordinary papilloma.

Patient rapidly recovered from the effects of this operation, and on May 21 he was up and about playing. After a few days' practice he was enabled to dispense with the tube, which was left out altogether on June 4, and on June 13 he went home, free from dyspnœa, able to speak in a loud whisper, the voice being distinctly improved since the operation, so that with care one could distinguish what he said, and able to blow a whistle as well as any other boy.

He only remained out ten days, being brought back on account of a recurrence of the nocturnal paroxysms of dyspnœa; but he had none during the six days that he was in the hospital (June 23-29, 1888).

On July 2, however, he was again readmitted with dyspnœa, the chest sinking in with inspiration. His condition was so serious that on July 6 the trachea was opened a second time, and the tube replaced rather more than a month after it had been left out. His condition was practically the same now as before the thyrotomy, and as it was supposed that there were more growths to be removed, he was again put under the influence of chloroform, the scar reopened for one inch, and the wound enlarged by crucial nicks. A sulcus showed where the thyroid cartilage had been previously divided, but no trace of the silk ligature was found. The thyroid was again divided, whereupon a quantity of pus escaped, from which I inferred that suppurative perichondritis had been the cause of the recent dyspnœa. The wound was approximated, no suture of the cartilage being employed, and it was

healed in a short time. The dyspnœa was still urgent when the tube was taken out; and during the months of October and November he had a severe attack of subacute bronchopneumonia, culminating on November 30 in coughing up some pus. During these months he had gradually been getting thinner, and had acquired a worn, hectic appearance, and often he seemed thoroughly exhausted by the bouts of coughing. His condition was deemed now to be well nigh hopeless, and as he had persistently complained of pain in the left side of the larynx, I accepted the discharge of pus as an indication for a further exploration, which was accordingly made the same day, the whole wound being reopened and the larynx and trachea split down to the site of the tube. No more pus was evacuated; no necrosis of cartilage or fresh growths were found, but from this time he gradually recovered, the chief difficulty being to find a comfortable tube for him to wear. His weight was now twenty-six pounds, or less than that of a year ago. He left the hospital in January, 1889, and returned June 17, when it was found that he could breathe without his tube. On July 15 he again left, able to talk in a hoarse voice, some letters being badly articulated, although he seemed to prefer to talk in a loud whisper. Most of the breathing was still performed through the tracheal sinus. In February, 1891, he was readmitted and anæsthetized, but it did not seem desirable then to attempt to close the sinus, as merely placing the finger over it caused alarming dyspnœa. In January, 1892, he again came into the hospital, and a plastic operation was performed without any great difficulty, and with entire success. I should mention that Dr. Cookson believed that he removed some fragments of papilloma through the tracheal wound on one occasion. I was not, however, quite satisfied as to the identity of the fragments.

At our last annual meeting I showed the lad, who may be described as having recovered with only a slight alteration in voice, which should be less noticeable, I imagine, after puberty.—*Australasian Medical Gazette*.

THE TREATMENT OF SYPHILIS BY DEEP INJECTIONS OF CORROSIVE SUBLIMATE; REFERENCE TO INFLUENCE OF MERCURIAL INJECTIONS ON BODILY TEMPERATURE AND WEIGHT.

Dr. Zělëneff, of Kiev, publishes (*Meditzinskoie Obozrenie*, No. 3, 1891, p. 290) a careful report on 104 cases of syphilis treated by him in Prof. M. I. Stükovenkoff's clinic with corrosive sublimate after the formula: R—Hydrargyri

bichloridi corrosivi, vaselini, ana. M. f. ung. cui adde olei vaselini ut f. l. a. emulsio. contin. 22 per cent. hydrarg. corr. subl. D. S. To inject from one-half to two grains of the sublimate. In some cases the following "suspension" was employed: —Hydrargyri bichloridi corrosivi gr. xxxvi.; otei vaselini 1 oz. M. D. S. To inject one grain of the sublimate. In either case the emulsion was warmed in hot water and then thoroughly shaken just before using. In the case of half-grain doses the injections were repeated once every four days; in that of one-grain doses every six; and in that of two-grain every ten. In all, 915 injections were made; thirty-one patients being treated with half-grain doses, thirty-three with one-grain ones, and forty with two-grain ones. The following are the principal deductions from the clinical inquiry:

1. In the case of two-grain injections all syphilitic manifestations disappear on an average after five or six *séances*; in that of one-grain ones after eight or nine; and in that of half-grain doses after twelve or fourteen.

2. A local reaction (at the site of the injection) is mostly but trifling, in which regard the sublimate injections closely resemble those of salicylate of mercury (*vide the British Journal of Dermatology*, June, 1889, p. 276). Some pain was observed only in 32 per cent. of cases treated with half-grain doses, in 19 of those treated with one-grain ones, and in 27.5 of those treated with two-grain ones. Only once a two-grain injection caused a rather vivid pain, which appeared on the third day, being accompanied with some rise of the temperature (37.7 deg. C.). Infiltrations occurred only on eight occasions (twice after half-grain injections, twice after one-grain ones, and four times after two-grain). They were always but slight, and speedily underwent resorption.

3. As to the influence of the injections on the bodily weight, the latter fell in 39 out of 74 patients examined, while in 35 it increased during the course. Of the former 39 cases, in 10 some complications (stomatitis, diarrhœa, etc.) were simultaneously noticed, while in the remaining 29 (39 per cent.) the fall proceeded without any concomitant phenomena of the kind. For the sake of comparison, the author also examined (a) 21 cases treated by injections of suspended yellow oxide of mercury or benzoate of mercury; in 11 cases (of which one was complicated) the weight sank, while in 10 it increased; and (b) 60 cases treated with injections of solutions of mercurial (corrosive sublimate, succinimide, or benzoate of mercury); of them, in 32 the weight decreased, of which number in nine some complications existed, but in the

remaining 23 (38 per cent.) no such cause could be made out. The comparative observations showed further that (a) injections of mercurial solutions gave rise to a more considerable loss in the body's weight than mercurial "suspension;" (b) gain in the weight was generally lesser than the fall; (c) in the beginning of syphilitic eruptions the patient's weight sank but rarely, and then mostly in the presence of such complications as fever, subjective disturbances, etc.

4. As to the bodily temperature, in 40 per cent. of cases the first injection of the sublimate "suspension" is followed by a rise varying from 37.6 deg. to 38.5 deg. C. (mostly up to 37.7 deg. C.) and disappearing on the next day. Subsequent injections do not make any impression on the temperature. The febrile rises do not manifest any influence on the intensity of syphilitic lesions.

5. Of toxic phenomena there may be sometimes observed gingivitis (it occurred in seven patients, one of whom was treated with half-grain doses, three with one-grain ones, and three with two-grain); salivation (one case of three days' duration treated by two-grain doses); stomatitis ulcerosa (one case of seven days' duration, the affection developing after fifth injection of two grains); abdominal pain and diarrhœa (twelve cases, in three of which half-grain doses were employed, in three one-grain ones, and in six two-grain; in one of the latter cases blood-stained stools occurred).

6. The elimination of mercury through the kidneys proceeds much in the same way as in the case of yellow mercurial oxide (*vide* Dr. Zélèneff's paper in the *British Journal of Dermatology*, June, 1890, p. 190). That is, the distinct traces of the metal appear in the urine in about twelve hours after the first injection; after each subsequent dose the proportion of mercury markedly increases for from one to three days.

7. On the whole, injections of suspended corrosive sublimate in large doses afford a convenient and energetical method of treatment of syphilis. Its only drawback is constituted by occasional irritant effects on the gastro-intestinal tracts.—*Canadian Practitioner*.

THERAPEUTIC USES OF INTRAVENOUS INJECTIONS.

Therapeutic uses of intravenous injections has been ably discussed by M. Mayet before the Lyons Medical Society (*Lyon Médical*, May 10, 17, 24, 1891). Intravenous injections may be useful for three distinct purposes: (1) To make up a deficiency of the quantity of the circulating liquid, the result of a considerable loss either of blood as a whole (hæmorrhage) or of its fluid portions (cholera, etc.). (2) To

favor the elimination of certain toxic principles—namely, to wash out the organism—by largely increasing the quantity of liquid passing out by the kidneys. (3) To introduce various drugs into the circulation, in order to obtain a prompt action. M. Mayet considers that injections employed in the first manner act principally by re-establishing the mechanical conditions of the circulation, whether transfusion be employed or an artificial liquid injected. In cholera the blood loses a large portion of its watery constituents, and becomes highly concentrated; the introduction of liquid acts here in two ways, by increasing the fluidity of the blood, and by restoring its bulk. Undoubted successes have been in many cases obtained by adopting this method. As to the liquid to be employed, there has been much difference of opinion. What is least likely to be harmful to the corpuscles or the organism generally? Water does not appear to be highly suitable, owing to its known poisonous effect on proteid material, and an “artificial serum” has not in the author’s hands yielded better results than simple saline solution. The use of defibrinated blood is doubtful, it being very uncertain whether the foreign corpuscles, ferments, etc., may not exert a harmful influence. Probably the most satisfactory fluid in every way is water containing from 0.5 to 0.6 per cent. of sodium chloride: that has little action on the corpuscles or on the vessels, is easily prepared, and rapidly miscible with the circulating blood. The mode of injection is important. Theoretically, a given vessel should never contain at any moment a quantity of foreign liquid more than equal to that of the contained blood. Thus, if the median basilic vein be employed, this quantity would be about one ounce per minute. In practice, however, not much harm arises from the injection of as much as ten ounces in six minutes, and this should generally be the maximum quantity for a single injection, save in cases of extreme urgency, in which the relative emptiness of the vessels is the chief danger. The quantity injected in a given time should also be regulated by the extent to which the eliminative function of the kidneys is impaired, a point to be specially remembered in the case of cholera. Danger of phlebitis is inconsiderable if proper precautions be adopted in operating. The next use of intravenous injections—to favor the elimination of certain toxic principles—is one which has been much studied of late, especially in its application to uræmia. Its employment in man has been limited, but Dastre and Loyer showed its practicability in 1888, and pointed out the necessity for extreme slowness in injecting and for regulating the quantity used by the rapidity with which elimination,

which takes some time before commencing, is carried out. This application of intravenous injections is suggested by M. Mayet as a means to be adopted in poisoning by "blood poisons" such as arsenical compounds, arseniuretted hydrogen, sulphuretted hydrogen, chlorate and nitrate of potash, in acute poisoning by salts of mercury and lead, and with some chance of success in poisoning by alkaloids and digitalis. It might also be successful even in conditions due to presence in the blood of toxines, ptomaines, etc., the results of bacterial growth, and in such conditions as uræmia. The action in cholera is probably of this kind, the products of the comma bacillus being dissolved and eliminated at the same time as the bulk of the circulating fluid is restored. The introduction of drugs directly into the circulation is more doubtful ground, and is a proceeding the advisability of which has been with some reason called in question. Without doubt this is the most certain and rapid method of administration, and the one generally preferred in physiological experiment, as one can be quite sure that the action of the drug will be quickly and surely produced. Of course the hypodermic method is generally sufficiently rapid, but some drugs are unsuitable, either from the quantity required, or from the fact that they produce serious inflammation (for example, chloral). Occasionally, too, as after swallowing soluble poisons, it may be desirable to produce emesis by apomorphine more rapidly than it would occur after hypodermic injection, and in these circumstances M. Mayet would be inclined to inject the drug, in very weak solution, of course, into the veins. The objections which have been urged against the method are that there is a risk of (1) unduly violent action, and (2) of the formation of clots in the vessel which may become carried as emboli into the general circulation. Both these dangers can, however, be obviated by using sufficiently dilute solutions, and by injecting very slowly. The method of injecting will be the subject of a future paper, as well as the advantage of the employment of chloral, etc., by intravenous injection in cases when swallowing is impossible.—*Brit. Med. Jour.*

TREATMENT OF ACUTE TORTICOLLIS.

According to Professor Phocas, of Lille (*Rev. des Mal. de l'Enf.*, October, 1891), acute torticollis is far more common in childhood and youth than in adult or old age. He recognizes two main varieties: (1) acute torticollis following immediately a sudden movement of the head, and due to sprain of one or more articulations of the cervical vertebræ—acute

traumatic torticollis; (2) acute torticollis following exposure to cold, and due to slight cervical arthritis or to muscular rheumatism—acute rheumatic torticollis. In a few cases the acute traumatic variety may be due to partial rupture of muscles. In either of the two above mentioned forms clonic contractions may be superadded to the tonic contracture. The muscle involved primarily is usually the trapezius. As to treatment, hot applications are the best anodynes; massage of the contracted muscle is a more effectual remedy, and often gives immediate relief, but M. Phocas recommends particularly the application of a collar in the following manner. The patient is placed in a Sayre's suspension apparatus as for the treatment of cervical caries; he is then very slowly suspended partially. In this way the muscles are uniformly stretched, and their resistance gently overcome with little or no pain. A collar of moistened millboard is now applied and retained in place by a few turns of bandage. The patient remains in the apparatus about ten minutes more, and when liberated is free from pain. In one case the collar was removed on the next day, and the symptoms had all disappeared.—*Brit. Medical Journal*.

REMOVAL OF BREAST DURING HYPNOTIC SLEEP.

Dr. Schmeltz, of Nice, has recently recorded a case (*Gazette Medicale de Strasborough*) in which he removed a sarcomatous breast during an anæsthesia caused by hypnotism. The patient was a girl, æt. 20, who was easily thrown into the hypnotic state. The operation was performed in the presence of Drs. Lauza and Barriera, and the entire organ, together with the aponeurosis of the pectoralis major was removed by the oval incision. Five drainage tubes were inserted and the wound was closed with thirty-two metallic sutures. The operation lasted an hour. The patient remained absolutely insensible, in a condition of the deepest anæsthesia, such as is only seen after large doses of chloroform. Dr. Schmeltz says: "I operated very slowly and quite at my ease; the patient even tried to encourage by her words; she seemed very gay, and laughed loudly from time to time as if to show that she felt no pain. In order to make the operation easier for me, she turned herself about, so as to place herself in the most favorable position, keeping her right arm stretched out so that no assistant was required to keep it steady." She was kept under observation the rest of the day, and having been told not to feel pain and to have a good night she obeyed these instructions in the most docile manner. The wound was completely healed on the fifteenth day. The only symptom worth

mentioning which Dr. Schmeltz observed in the patient during the operation was great pallor of the countenance, without any dilatation of the pupil or weakening of the pulse. The tumor weighed two kilograms.

GYNECOLOGY.

VAGINAL SECRETIONS.

The May issue of the *Archives of Gynecology, Obstetrics and Pediatrics* contains a *résumé* of Doederlein's work on vaginal secretions, read by Dr. J. W. Williams, before the Baltimore Gynecological Society.

Doederlein's object was to find what constituted the normal vaginal secretion, and to determine its relationship to puerperal troubles. Healthy young virgins were selected to furnish a normal secretion, which is described as a small quantity of whitish, crumbling material of the consistence and appearance of curdled milk; it contains no mucus and has an intensely acid reaction to litmus paper. Microscopic examination shows it to consist of vaginal epithelial cells and a large quantity of large bacilli. The pathological secretion, on the other hand, is of a yellowish or greenish-yellow color and cream-like consistence, and often contains mucus and gas bubbles; its reaction is weakly acid or neutral and sometimes alkaline. The microscope shows epithelial cells, numerous pus cells and a mixture of all kinds of micro-organisms. Among 195 pregnant women examined, 44.6 per cent. had pathological secretions.

A point of decided interest is that the large bacilli were always present in the normal and never present in the pathological secretions. This bacillus produces an acid (probably lactic acid) which causes the normal acidity of the vaginal secretion. The products of the life of this bacillus were proved to be inimical to the growth of most of the pathogenic micro-organisms. Large quantities of pus-producing organisms introduced into the vagina would completely disappear in four days. The bacillus is not pathogenic, and, therefore, sepsis can occur only by having poison germs introduced from without, and even these must be in large quantity to counteract the effect of the acid-producing bacilli of the normal secretion.

The proof of the pathogenic nature of the pathological secretion lay in the effect of injecting this secretion in rabbits—

suppuration occurred in each case, and death followed in several. This secretion contains almost all kinds of micro-organisms, and in about 10 per cent. of the cases streptococci were found. From these observations it is concluded that as streptococcus is usually the cause of puerperal fever, and as this organism is found in only about 10 per cent. of the cases having a pathological secretion, there is no danger of auto-infection among 90 per cent. of all women, whether their secretions be normal or pathological; nor is there any justification in these cases for internal disinfection.

Doederlein believes that the streptococci are unable, of themselves, to invade the uterine cavity and produce infection, and holds that the only way for this accident to occur is for the germs to be carried there by manipulation and douching. A practical application of these observations is made in the lying-in hospitals at Leipzig. Students are not allowed to examine patients until the vaginal secretions have been pronounced normal. Permission is not granted for those cases in which the secretion is pathological. Experiments were made with pathological secretions, during the course of pregnancy, to determine how best to restore the secretions to the normal standard.

Of the many agents used, Doederlein found a 1 per cent. solution of lactic acid the best. This appeared to produce an unfavorable medium for the growth of the pathogenic organisms, while it supplied the most desirable conditions for the development of the normal vaginal bacilli, which in turn, by their action, made the secretions unfit for harboring most of the pathogenic organisms. In many cases thus treated the pathogenic were sure to give place to the normal vaginal bacilli and the secretions change from an unhealthy to a normal.—*University Medical Magazine.*

MORTUARY REPORT OF NEW ORLEANS.

FOR AUGUST, 1892.

CAUSE.	White	Colored...	Male.....	Female....	Adults	Children.	Total
Fever, Yellow							
“ Malarial (unclassified)....	8	8	9	7	8	8	16
“ Intermittent		1		1	1		1
“ Remittent	11	2	7	6	8	5	13
“ Congestive.....	8		5	3	4	4	8
“ Typho	4	2	2	4	4	2	6
“ Typhoid or Enteric.....	9	2	6	5	11		11
“ Puerperal							
Influenza.....							
Scarlatina							
Measles		1		1		1	1
Diphtheria	5		4	1		5	5
Whooping Cough	2	1	2	1		3	3
Meningitis	8	2	5	5	3	7	10
Pneumonia.....	10	4	6	8	6	8	14
Bronchitis	7	5	4	8	3	9	12
Consumption.....	38	31	32	37	66	3	69
Cancer	8	6	5	9	14		14
Congestion of Brain.....	10	2	8	4	6	6	12
Bright's Disease (Nephritis)	13	4	11	6	17		17
Diarrhœa (Enteritis)	23	18	25	16	25	16	41
Cholera Infantum	7	4	3	8		11	11
Dysentery.....	9	4	8	5	11	2	13
Debility, General	1			1	1		1
“ Senile	8	12	11	9	20		20
“ Infantile	10	1	6	5		11	11
All other causes	191	96	168	119	179	108	287
TOTAL	390	206	327	269	387	209	596

Still-born Children—White, 28; colored, 30; total, 58.

Population of City—White, 184,500; colored, 69,500; total, 254,000.

Death Rate per 1000 per annum for month—White, 25.36; colored, 35.56; total, 28.15.

F. W. PARHAM, M. D.,

Chief Sanitary Inspector.

METEOROLOGICAL SUMMARY—AUGUST.

STATION—NEW ORLEANS.

Date.....	TEMPERATURE.			Precipn. in inches and hundredths.	SUMMARY.
	Mean	Max.	Min.		
1	81	87	75	0	Mean barometer, 30.028.
2	80	85	74	0	Highest barometer, 30.180, 11th.
3	81	88	74	0	Lowest barometer, 29.896, 16th.
4	82	90	75	T	Mean temperature, 81.7.
5	84	90	77	0	Highest temp., 92, 25th; lowest, 70, 6th.
6	78	87	70	.20	Greatest daily range of temperature, 19, 30th.
7	80	85	74	.93	Least daily range of temperature, 9, 16th.
8	80	86	75	T	MEAN TEMPERATURE FOR THIS MONTH IN—
9	81	87	75	.46	1871.....82.8 | 1877.....82.8 | 1883.....83.3 | 1889.....80.6
10	82	87	77	T	1872.....82.5 | 1878.....83.6 | 1884.....82.3 | 1890.....80.6
11	82	88	77	T	1873.....81.0 | 1879.....80.8 | 1885.....80.4 | 1891.....81.1
12	84	91	77	0	1874.....83.8 | 1880.....81.1 | 1886.....81.4 | 1892.....81.7
13	82	88	75	.29	1875.....79.1 | 1881.....82.8 | 1887.....81.0
14	80	85	75	.38	1876.....81.9 | 1882.....80.5 | 1888.....78.2
15	82	87	76	1.20	Total excess in temp'ture during month, 8.
16	78	82	73	2.09	Total deficiency in temp'ture since Jan. 1, 372.
17	81	88	74	.04	Prevailing direction of wind, S. W.
18	82	89	76	T	Total movement of wind, 4461 miles.
19	83	90	76	.19	*Maximum velocity of wind, direction and date,
20	82	90	74	0	27 miles, from N. E., 30th.
21	82	87	76	0	Total precipitation, 6.96 inches.
22	82	88	77	.02	Number of days on which .01 inch or more of
23	82	89	74	0	precipitation fell, 12.
24	83	90	76	T	TOTAL PRECIPITATION (IN INCHES AND HUNDREDTHS)
25	84	92	77	0	FOR THIS MONTH IN—
26	84	92	77	0	1871..... 7.21 | 1877..... 2.54 | 1883..... 4 12 | 1889..... 5.59
27	84	90	77	.09	1872..... 3.75 | 1878..... 5 31 | 1884..... 0.87 | 1890..... 3.62
28	82	90	74	.07	1873..... 8.30 | 1879.....10.44 | 1885..... 4.25 | 1891..... 1.69
29	82	89	74	0	1874.....48.2 | 1880..... 4.60 | 1886..... 2.40 | 1892..... 6.96
30	82	91	72	T	1875.....86.1 | 1881..... 4.21 | 1887..... 7.42
31	82	90	75	T	1876.....44.4 | 1882..... 9.47 | 1888.....22.74
					Total excess in precipitation during month, 76.
					Total deficiency in precip'n since Jan. 1, 3.96.
					Number of cloudless days, 3; partly cloudy
					days, 18; cloudy days, 10.
					Dates of frost, —.
					Mean maximum temperature, —.
					Mean minimum temperature, —.

NOTE.—Barometer reduced to sea level. The T indicates trace of precipitation.
To be taken from any five-minute record.

G. E. HUNT, *Local Forecast Official.*

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No. 5.

Original Articles.

[No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the first day of the month preceeding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a written order for the same accompany the paper.]

TREPHINING THE CRANIUM, WITH REPORT OF CASES.*

By JOHN H. MCINTYRE, A. M., M. D., ST. LOUIS, MO.

According to Chelius, wounds of the head are among the most difficult and important objects of surgery.

Their great importance depends on injury of the brain, which either occurs at the time of reception of the wound or comes on afterward. Upon the present occasion we will consider injuries which produce a breach of continuity of the osseous structures which require the operation of trephining.

It is not my intention to take up the time of this large and intelligent body of surgeons with the differential diagnosis of concussion and compression. Neither to speak of the requisite acumen necessary to recognize a laceration of the brain by *contre coup*, nor to describe the various varieties of fracture of the skull.

I may here remark that this operation is quite an ancient one, and in its earlier history it was performed in rather a crude manner, and the fatality following it was very great. Notably was this the case in comparatively recent times, and before the advent of antiseptics, especially in the hospi-

*Read before the National Association of Railway Surgeons.

tals of Paris and Vienna, where it was almost always fatal. Indeed, the great Nelaton stated that for fifteen years previous to the year 1860 all the cases of injury to head occurring in the hospitals of Paris requiring trephining terminated fatally. The English and Scotch operators in those days also met with a high grade of mortality, while in the United States the mortality was high, yet it was much lower than either of those above mentioned. Of course, different results will obtain in the experience of different surgeons in any country, and better results will be met in private than in hospital practice.

We may indulge in some pardonable pride at the results of American surgery in gunshot injuries of the head, which is in striking contrast with that of military surgeons abroad, and bears favorable comparison with the results obtained in the Schleswig-Holstein war. In the Sepoy mutiny in India no soldier who was trephined ever recovered.

The English surgeons in the Crimean war only had four cases of trephining to recover, and it is not surprising that in the Franco-German war the operation was rarely performed.

Of course, with the advent of antiseptics and of improved technique in operating, the results of this operation, together with those of many others, have been vastly improved. Encouraging and even brilliant success now attends the use of the trephine for the cure of traumatic epilepsy, consequent upon neglected cases of depressed fracture of the skull. A careful study of the principles of cerebral localization makes it possible to diagnose cerebral abscesses and intracranial tumors with a fair amount of precision; and with our improved technique in operating, exploratory trephining is now a justifiable operation, and is quite as safe as exploratory laparotomy. This is well shown by the experience of those masters in cerebral surgery, Macewen, Bergmann and Horsey. Also that of Roswell Park, Keen and others. As far back as the year 1870 Macewen, of Glasgow, correctly diagnosed an abscess of the brain, and wished to operate for its relief. The operation being declined, the patient died. At the autopsy the abscess was found and the pus evacuated, the correctness of the diagnosis being verified.

The *London Lancet* of December 20, 1884, contains an

article published by Dr. Bennett and Mr. Godlee which startled the surgical world. Dr. Bennett had correctly diagnosed a tumor of the brain where no external evidence was visible, and requested Mr. Godlee to remove it. After the trephine had been used, no tumor could be seen. Mr. Godlee boldly incised the healthy brain, found a tumor the size of a walnut and removed it. The patient did well for three weeks, when inflammation set in and he died on the twenty-sixth day. Of reports of seventeen cases of tumors removed from the cerebrum to which I have had access, thirteen resulted in recovery; and in three cases in the cerebellum all proved fatal. Astonishingly good results have followed the operation of trephining in cases of epilepsy caused by old depressed fractures of the skull. And even insanity has been cured by operations in cases following injuries of the head. As has been before stated, previous to the days of antiseptics the operation of trephining gave a high rate of mortality; now, in proper hands, it has fallen to less than 3 per cent.; and a recent writer on the subject (Seydl) states that this operation *per se* is fatal in only 1.6 per cent. of the cases.

I doubt not there are gentlemen here present who can say they never lost a patient as the result of this operation. In my own experience I can remember but a single instance, the circumstances of which are as follows:

CASE I.—Frederick V., æt. 20, German, six feet in height, weight 170 pounds, fair complexion, large boned, strong and muscular, was trephined for epilepsy in the autumn of 1886. Two years previous he was thrown violently out of a wagon by a pair of runaway mules, his head striking against a tree. He was picked up in an insensible condition, which continued for several days. The scalp was not cut, but was greatly swollen and contused, and his case was considered one of concussion of the brain. He was confined to his bed for about three weeks, when he got up and resumed his ordinary avocation of farm work.

Two and a half months after getting up, he had a typical epileptic fit, which was shortly followed by another, and also by frequent recurrences up to the time he was presented to me for operation, previous to which time he had taken large

doses of the bromides, and many of the vaunted remedies for the cure of epilepsy.

Upon careful examination, I detected a slight depression at the superior edge of the right parietal bone near its middle, which suggested an uncomfortably close proximity to the longitudinal sinus.

Chloroform was the anæsthetic used. The scalp was shaved and rendered aseptic by the use of mercuric chloride solution, the skull exposed by a free crucial incision, a large trephine employed, the button of bone removed, and on its inner aspect was found a beautiful specimen of exostosis. This exostosis had by pressure not only produced the nervous symptoms from which he sought relief, but had also produced thinning of the coverings of the brain, so that with the withdrawal of the button of bone, which came away within the trephine, a gush of blood followed such as I had never before encountered; pressure was made first by sponges, then by antiseptic gauze, which, not being satisfactory, and by some chance happening to have several large velvet corks in the supply bag, one was first immersed in an antiseptic solution and tightly inserted into the hole in the skull, but in such manner that it did not extend inward further than the inner level of the skull. This controlled the hæmorrhage perfectly. (So far as I know the use of a cork under like circumstances had not been resorted to before.) It was allowed to remain twenty hours, when it was removed, hæmorrhage again being present; the cork was again placed in the antiseptic solution and reintroduced, being removed permanently at the end of twelve hours from that time. For many days the patient did well and no epileptic seizures followed, but at the end of six weeks he died of meningeal inflammation. On account of the length of time he lived after the operation I am not inclined to blame the cork for the final result.

A brief report of the following cases, all of which resulted in recovery, may, I hope, not be without interest:

CASE II.—Patrick O'D., æt. 7, was one of the forty-two persons injured in a wreck on the St. Louis & Santa Fé Railway on the night of May 23, 1889. When I saw him on the morning of the 24th I found him insensible and with stertorous

breathing. The condition of the pupils could not be ascertained on account of the immense tumefaction which involved the front and left side of the head. A scalp wound three inches in length was found extending obliquely downward and forward in the antero-interior parietal region, and underneath which was a depressed fracture, which involved both tables of bone, irregular in shape, two inches in length and nearly one and a half inches in breadth. A point of great interest presented itself in this case, in that we found a fissured fracture extending from the depressed fracture on a horizontal line directly backward to the extent of four inches. "Skull cracked like a gourd shell" was the terse and expressive remark of a gentleman who assisted in the operation. The boy's recovery was uneventful, with the exception of a large abscess in the post-parieto occipital region, the result of bruising of the soft tissues.

CASE III.—John D., æt. 22, brakeman, height 5 feet 10 inches, weight about 150 pounds; strong, healthy and vigorous. On the night of August 25, 1889, was thrown from the top of a freight car while the train was in motion, his head striking against the projecting pipe of a water tank. His absence was not noticed until the train had run five or six miles, when it was backed to the water tank to find what had become of him. He was found in the ditch by the road, lying in the mud and in an insensible condition. He was carried to the next station and medical aid summoned.

His condition was reported to me as follows: Profound unconsciousness, great tumefaction of right parietal and frontal region extending down to and below the orbit, and closure of the eye, scalp wound two inches long near vertex, no fracture. He regained consciousness in three or four days, and a week later, although having some rise of temperature, persisted in sitting up in bed. He also within another week developed great irascibility of temper and suicidal and homicidal tendencies—took a violent dislike to his doctor, and not only attempted to kill him, but himself also. He was now under the constant care of a nurse both day and night to prevent him doing injury to himself and others, although at short intervals he would appear quite rational. September 23, I received a letter from his

physician saying he was so unmanageable that he did not know what else to do with him, and asking if he had better send him to a lunatic asylum.

I saw him on the 24th, and without going into further detail, trephined him at a point in the antero-inferior part of the right parietal bone.

There was quite extensive fracture of the internal table of bone, with consequent depression and irritation, and more than enough reason for his irascibility and homicidal tendencies. His recovery was prompt, and his mental faculties were clear and normal from the time of his recovery from the anæsthetic. He claims to have no recollection of anything that occurred during the interval of time when he received his injuries, until after the operation which he underwent. He is now at this writing engaged in his occupation of twisting brakes.

CASE IV.—John M., æt. 9, a bright, healthy boy, and one of a family of eleven children, was kicked by a horse. He received a crushing blow which fractured the upper and lateral part of the frontal bone, and frightfully lacerated not only the meninges, but the brain tissue as well. When I saw him, a few hours after the receipt of the injury, I found brain substance upon his pillow, and it was also welling up, torn and shreddy, out of his ghastly wound. Many pieces of comminuted bone were removed. But what constitutes the chief interest in this case was the great amount of torn and lacerated brain tissue which was not only lost before my arrival, but also what I cut away with scissors before approximating the external flaps. The boy made a perfect recovery, and with the use of all his mental faculties. Indeed, I have repeatedly heard his father say that Johnny was the smartest boy he had, but was now smarter than before he was hurt. I might report many more cases, some of them presenting very great clinical interest, did time permit.

NEGRO PRACTICE.

By DR. BRUCE McVEY, ELLA, TEXAS,

The practice of medicine on the colored population is a little patch of science to itself, separate and distinct from the main field of scientific medicine; while the negro race is an-

atomically and physiologically similar to the white, and is, of course, governed by the same general laws of nature—calomel and quinine acting like calomel and quinine, pneumonia and typhoid fever affecting them as the same diseases do people of other races and nationalities—yet they have constitutional peculiarities worthy the notice of any careful practitioner.

They are, on the whole, a stouter and heartier people than the whites—their habits and environment modifying, in some degree, the course of disease and the effect of drugs, but there are points about them still which their physical superiority, habits and environment fail to explain. For instance, we take an average negro of the South, place him side by side with a white man, who is apparently his superior in physical strength and endurance, put them to work in an intensely malarious district, and the white man will have chills and fevers, with a hypertrophied liver, and enlarged spleen, a thick yellow skin, furred tongue and yellow conjunctivæ; possibly ending the scene with a congestive chill or black jaundice, while the negro will be comparatively unaffected. One might say that it was the diet, or the kind of work, that the white man could not stand, but that is not the case; you might surround him with everything the most salubrious possible in a malarious district, and place the negro on the other extreme, and still the white man would sicken and suffer, while his dusky companion would pass through it all unaffected. It must not be inferred, however, that I mean to say that the colored population are wholly exempt from the influence of malaria—only comparatively so. They have chills and fevers and other malarious affections; but not to the same extent and same degree to which white people are subject to its influence, though, from some of the most formidable diseases of malarial districts the negro is practically exempt—*e. g.*, pernicious forms of malaria, black jaundice, etc.

The question may be asked, what about the mulatto? Well, the mulatto, while not as healthy as his more dusky brother, is, as a rule, more healthy than the white man; however little negro blood he may have in him, it seems protective in that proportion against pernicious malaria and black jaundice; hence, as a logical suggestion, the essence of *Afri-*

canus would be the specific to black jaundice. The colored laborer has a peculiar aroma (?) or effluvium to the white olfactory, which, once recognized, can never be forgotten; and the laity vulgarly say that it is this peculiarity in question that makes them so healthy. Every doctor who has practised on negroes in the country knows of the rarity of consumption among them; it is the most rare thing that you see a *black* person with any tuberculous disease. When I say country, I don't mean small towns, where they lay around damp dives, gamble and practise all manner of dissipations all night, and if they eat anything it is a little canned goods and crackers; I mean clear away from any town, out on the farms where they eat corn bread and bacon, go in the sunshine and sleep in open houses.

This resistance to consumption is not innate in the negro like his resistance to malaria, as is shown by hospital records. Nor does it seem that their resistance to malaria surpasses that of the white man in cities. Taking the mortuary report of some of our southern cities as a criterion, for instance, the city of New Orleans from January 1, 1891, to July 1, 1891, six months, of all the deaths from malaria (classified and unclassified) 33 per cent. were colored, whereas, only about 27 per cent. of the population are colored, making as will readily be seen, the ratio considerably in favor of the whites, but this does not exist in the country, I can readily assure you, and feel sure that any country practitioner will bear me witness.

Now, as to consumption, we will take the same city, in the same period of time (January 1, to July 1, 1891), and we have 43 per cent. of deaths, colored, against 27 per cent. of population, which is worse still for the colored people of cities.

This difference of death rate in city and country is chiefly owing to their modes of living. In cities they are often crowded together in close, damp apartments (say nothing of dirt, for it doesn't seem to hurt them), and their food is different from what they have in the country. Then, I believe, too, that the negro is essentially a country growth, as it were, always having been used to country life, with its fresh air and sunshine, so that when he is taken up and transplanted to the city he is as something foreign, and falls a prey to the germs of malaria, consumption, etc.

Now, as to their diet, I have said that this makes a difference, and more especially do I believe that it makes a difference as regards consumption. Every physician knows that the oils and fats, in general, are good substitutes for cod liver oil, and that cod liver oil is good for consumption. He also knows, if he has ever lived on a farm worked by colored labor, that their chief articles of diet are bacon and corn bread. They relish it, and evidently want nothing more. It has been said in some medical journal that the Jews have less consumption than people of other nationalities, and I believe their insusceptibility was attributed to the fact of their eating no hog meat. If this be true, then we have a paradox, and our observations for many years have been erroneous—a fact which I am loth to believe. I had rather think, if it be true that few Jews die with consumption, that if they would eat hog meat, none of them at all would die with the dread disease.

I would that I had mastery of the pen that I might picture to you an Afro-American family on a cotton plantation, with its little ones in the sunshine bareheaded, munching a piece of corn bread and bacon or chewing sugar cane, with no other garment to hide their nudity than a little cotton slip or skirt. Strange to say, these little fellows are healthy; they have the digestive power of little ostriches. They often grow to maturity without a day's sickness. I have had them tell me that they never had a chill or fever in their lives, yet they were raised on the bottom where you would think nothing but an alligator could be healthy.

Now, there is one other feature of negro practice worth mention: that is venereal diseases. If you see a negro, generally, who has had a chancroid with bubo, he will tell you that he has had gonorrhœa; but if he had a chancre without any accompanying chancroids and buboes, it is very hard to make him remember that there was ever anything the matter with him. If he has had a true case of gonorrhœa, he will tell you that he has had "*runnin-in-the-range*" (or running range, running at the reins) from a severe strain. There is a great number of them affected with venereal diseases, especially in towns; consequently, physicians who practise among them have a great deal of organic stricture of the urethra and secondary

and tertiary syphilis to contend with. Hardly ever does a physician get a chance at it in the primary stage, not longer, at most, than to prescribe a stick of lunar caustic to burn the chancre with. All the patient wants or thinks he needs is something to afford a respite, so that he can indulge himself again. Then, too, he can not quite understand that purification-of-blood theory, and thinks where he is taking medicine and can not feel or see anything wrong with him, that the doctor is getting the better of his purse. They are a great people for something tangible and visible; therefore, they like liniments, plasters, etc. If you give one a drug, he likes it to be hot and stimulating, so that he can feel the warmth in his stomach after he has taken it. If you give him a purgative, he wants it to be brisk as possible.

One might suppose that there was a great deal of hereditary syphilis among negroes, but it doesn't seem very marked. According to my observations, though they be not very extensive, white children have to suffer more for the deeds of their fathers than colored.

OPERATION FOR THE RADICAL CURE OF INDIRECT OR OBLIQUE INGUINAL HERNIA.

By F. O. SUMMERS, M. A., M. D.

Formerly Professor of Anatomy, Vanderbilt University, Nashville, Tenn.

Having operated with satisfactory results upon a sufficient number of cases for the radical cure of oblique inguinal hernia, to report positively upon the subject, I desire to lay before the profession, through your columns, my method of operating, that it may be considered by those who are interested in this line of surgical work. I shall not take up time or space in the review of hernia and the methods which have been adopted for its cure—whose name is legion—but simply state my own method, which has proved absolutely successful in so many cases that I feel justified in offering it as a fixed method of operation for radical cure.

I generally operate without general anæsthesia where the patient is willing to trust to my assurance that there will be but little or no pain connected with the operation. The local injection over the parts of a solution of cocaine hydrochlorate,

five (5) grains to the half ounce of distilled water, will generally prove sufficient—using about two hypodermic syringefulls—one at each end of the inguinal canal—external landmarks.

I then invaginate the scrotum—after of course reducing the hernia—with the forefinger of my left hand, carrying it as far as possible up the canal.

With a canula needle I pass a silver suture (No. 26) from right to left, including the scrotum on the end of the finger. Clipping that, I pass another from above downward under the former, and then a third across in the axis of the canal. The ends are all then drawn together respectively and firmly twisted, a compress and bandage applied and the patient kept *absolutely* quiet for four days, when the sutures may generally be removed, although it is safer to let them remain for a week, after which time a bandage or light truss is worn until the neoplasm is complete. Generally the integument of the scrotum will come back down through the canal gradually, leaving the dartos and tunics plugging the cavity, closely attached to the walls of the canal remaining as a permanent and complete obstruction to the passage of the intestine. This is very simple, but in my hands it has proved a brilliant success.

Waukesha, Wisconsin.

Proceedings of Societies.

ALLEGHENY COUNTY MEDICAL SOCIETY.

J. C. LANGE, M. D., President, in the Chair.

Dr. Koenig read a paper entitled

A HISTORY OF A CASE OF DOUBLE PNEUMONIA ILLUSTRATIVE OF THE ABORTIVE TREATMENT.

The following case of pneumonia may perhaps be deemed worthy of recital before this society. I present it for your consideration and comment. Be the initial cause of pneumonia whatever it may, I am firmly convinced that the consolidation of the lungs is due to excessive efforts on the part of nature to repair the damage that has been done to the extra-

ordinarily vascular lung tissue, and to guide, or, more properly, to restrain, the reparative forces is the course that would seem to be indicated in the treatment of acute lobar pneumonia. In exemplification of this line of treatment of an acute pneumonia I submit the following history: One week ago to-day at 8:30 o'clock in the morning I was called to see Mr. J. R., aged 37. The night previous, while conducting the calcium light arrangements in one of the theatres, he experienced acute shooting pains in his chest, but remained at work till the conclusion of the play.

Shortly after arriving at his home, about 1 o'clock, he was attacked with a severe chill and suffered intense pain about the region of, and somewhat inferior to, the left nipple. From that time till I saw him he suffered unremittingly, in spite of thorough application of mustard. His breathing was so difficult that the first glance was sufficient to locate the cause of his illness in his chest, and closer investigation revealed the following conditions: Pulse 108, temperature $102\frac{1}{2}$ deg., face flushed, respiratory movements very painful and abrupt. Auscultation over the front of the chest revealed roughened respiratory murmur, but on account of the suffering of the patient the physical examination of the lungs was not very perfect. A rather profuse and extraordinarily well marked rusty expectoration, however, satisfied me as to the condition of the lungs when conjoined with the other superficial symptoms. The cough, by reason of the pain, was suppressed as much as possible. The first requisite to my mind was to relieve the pain, which was accomplished by a hypodermic injection of one-fourth grain of sulphate of morphine and one-one hundred and fiftieth of a grain of sulphate of atropine. The second indication to my mind was to divert the blood stream and reduce the heart's action. With this end in view I gave him a hypodermic tablet of hydrochlorate of apomorphine of the strength of one-tenth of a grain. This I gave dry on his tongue, and it would, I hoped, nauseate him somewhat and initiate diaphoresis. I then wrote the following prescription:

℞	Tincturæ Veratri Viridis.....	gtt. 1.
	Sodii Salicylati.....	5 iv.
	Syrupi Senegæ.....	f 3 iij.
	Aquæ Menthæ Piperitæ q. s. ad.....	f 3 ij.
℥	Sig. A teaspoonful every two hours.	

Being a man of vigorous health, weighing about 165 pounds, I considered two drops of the veratrum none too much, even conjoined with the ten grains of salicylate of sodium every two hours. The salicylate was added for the reason that some five or six years before I had attended the same patient through an attack of acute articular rheumatism, and

thinking a similar influence might possibly be associated with his present illness it was added for both its anti-rheumatic as well as for its diaphoretic and heart sedative action.

The first dose of the prescription mentioned was given him about 9 o'clock. At 3:15 P. M. he was bathed in perspiration, earning his life by the sweat of his brow, as it were; his pain was less severe, pulse 98, temperature 100 deg., and his cough was somewhat relieved. His expectoration was strongly tinged with a rusty color. During the time of my visit he became sick at stomach and vomited some grumous fluid, evidently the result of the apomorphine administered earlier in the day. At 10 P. M. his pulse was 88, temperature 99¼ deg., pain much relieved, face less flushed, but the perspiration was still profuse. I ordered the mustard to be reapplied.

February 10, 10 A. M. Pulse 80, temperature 98¼ deg., countenance almost normal in expression and color, sputum somewhat less markedly tinged, cough slight, pain produced only on deep inspiration, slept well during the previous night, diaphoresis still profuse, urine highly colored and viscid. I ordered a solution of citrate of magnesium in wineglassful doses to quench the thirst and relax bowels. Thinking the severity of the attack overcome, the veratrum and salicylate were reduced to one-half the former dose.

February 10, 6 P. M. Pulse 80, temperature 99½ deg., face a little more flushed, cough moderate, sputum rather more deeply colored. Full dose of the veratrum again resorted to. Diaphoresis less profuse.

February 11, 9:30 A. M. Pulse 72, temperature 98½ deg., patient passed a comfortable night, slept considerable, cough slight, sputum still red but more faintly so, diaphoresis slight, face almost natural in color. During the past forty-eight hours the patient was so moist with sweat and was withal doing so well that it was thought best not to subject him to a physical examination of his chest. At this time, however, an examination was made and the base of the left lung, posteriorly, was found somewhat dull on percussion, and over an area of about the size of a hand distinct crepitant rales were heard; on the right side over a smaller area the same condition was discovered, but the rales were more of a submucous variety. The fifty drops of tincture of veratrum viride and the half ounce of salicylate of sodium being exhausted, the prescription was ordered refilled and continued in slightly reduced doses. Another bottle of magnesium was also ordered.

February 11, 6 P. M. At this time the patient was seen by Dr. Pettit, who found his temperature to be 100⅛ deg., and pulse 73. The crepitant rales on both sides were also noted

by him. Diaphoresis and cough slight, pain almost absent. The pulse being reduced to about normal, he lengthened the interval between the doses of medicine to three hours.

February 12, 10:30 A. M. Pulse 64, temperature 98 deg., patient rather pale, but feels well, expectoration still colored, cough less frequent, no pain, crepitant rales more moist, though still well marked. I discontinued the veratrum and salicylate, substituting for it the following prescription:

℞ Potassii Iodidi 3 i.
 Syrupi Pruni Virginianæ.....
 Aquæ Fœniculi aa f 3 iss.
 M Sig. A teaspoonful every three hours.

February 12, 6 P. M. Pulse 72, temperature 98¼ deg. General condition excellent. Patient begins to desire food.

February 13, 11:45 A. M. Pulse 60, temperature 98 deg., cough rather increased, but expectoration more scanty though still tinged with yellow, crepitant rales still recognizable on both sides, though more moist in character. The medication was reduced to one-half teaspoonful every four hours, and the patient was allowed to sit up part of the day.

February 14, 5:30 P. M. Pulse 64, temperature 98¼ deg. The patient sat up all day. His appetite was good and he was without pain. His cough was almost voluntary, but at the base of the left lung some mucous rales could still be heard. His expectoration was colorless, and his general condition, aside from the reduced pulse rate, normal.

In the absence of consolidation and bronchial breathing, some may, perhaps, be inclined to doubt the genuineness of the pneumonia, but when we consider the powerful influence to which the patient was subjected prior to the time when those symptoms could have been developed, their absence is easily explained. The subnormal temperature, and especially the subnormal pulse, after the cessation of the inflammatory process, might be considered analogous to the hypnotic or even narcotic effect often seen after the passage of nephritic calculi where a powerful anodyne was administered during the passage of the calculus, without, perhaps, entirely allaying the excruciating pain.

Dr. Rigg—I believe this is the proper treatment. It is the treatment that should be followed in pneumonia with very few exceptions. The selection, however, of the particular cardiac sedative is the choice of the practitioner. I prefer aconite, but I will leave that entirely with the individual physician. In the early stage of pneumonia stimulants have been recently recommended and recently condemned; I think they are injurious; they are contrary to the effect you want to pro-

duce. I have been following that treatment for the last thirteen years, and I have no reason to regret it, no reason to believe that any other treatment I have seen, and have at times taken part in, is any better.

Dr. Duff—I was very much impressed with this case, which is certainly well worthy of remembrance. My observation teaches me to believe that salicylate of sodium is one of the best remedies of this kind. I wish to call attention to the fact that salicylate of sodium is one of the most efficacious remedies in my hands, and in the hands of several practitioners with whom I have spoken on this subject. There is a condition in pneumonia analogous to that we have in rheumatism, and the operation of the medicine is to a certain extent in the same line.

Dr. Thomas—I wish to corroborate what Dr. Duff has stated, that salicylate of sodium is possibly one of the best remedies in pneumonia. In the *Pittsburg Medical Journal* some years ago I gave the statistics of the continuance or the length of the disease, and the average limit of the disease as treated by salicylate of sodium. I look upon the disease as analogous in its character to rheumatism, and that both exist under a similar climatic condition, and that both require pretty much the one treatment. I do not remember what year my report was made, but if any of you wish to refer to it you can get it in the journal published by Dr. Gallaher some years ago.

Dr. Daly—There can be no doubt that, viewed as a great controller of the heart's action in inflammatory diseases, veratrum viride is a very useful remedy. I have used it more or less for twenty years, but it has always occurred to me that a more important point, or quite as important a point, is to know when to abate its administration. It is so potent a remedy that unless good judgment is observed in abatement of the dose, serious harm may be done with it. I have for many years been in the habit of instructing the nurse to count the pulse, with the instructions that when the pulse fell to 95, with some moisture about the hands, to increase the interval of the dose and diminish its quantity to one-half or one-fourth of whatever had been given, and with instructions that if the febrile action increased to increase the dose again.

With reference to the value of salicylate of sodium in pneumonia, I think many can testify to its value, but I presume it is of value because of the common origin, frequently, of pneumonia and acute rheumatism. I think every man who has been an observer in the practice of medicine for fifteen or twenty years, or even less, will come to the conclusion that many acute pulmonary affections, such as bronchitis and pneumonia,

have their origin within the system, not without the system at all, from the retention of broken down products. What we may regard as a rheumatic condition may in one case produce rheumatism and in another case pneumonia, in another case rheumatic bronchitis, or even a rheumatic pleurisy; that I have demonstrated to my own satisfaction more than once, and therefore it is reasonable that salicylate of sodium gives such results as it does. It will also reduce temperature and the heart's action, and for prompt and efficient work it is very difficult to find a remedy equal to it; but one must know when to stop the remedy.

Dr. Borland—I have used tincture of aconite with about the same results as Dr. Kœnig has had with *veratrum viride*. Salicylate of sodium, in my experience, has been satisfactory in many cases, but it is hard upon the stomach, and for this reason I have not been able to give full doses. What is called salicylate of sodium, that preparation that is made use of in filling prescriptions, is a preparation I understand made from coal tar products, or in other words, there is no true salicylate of sodium about it. Salicylic acid, which is made use of, is a synthetical product. I am in the habit of ordering the true salicylic acid and combining it with ordinary bicarbonate of sodium. I find that this combination is much more easily borne, and has better effects.

Dr. Davis—I would like to state that I never have been able in private practice to give salicylate of sodium longer than twenty-four or thirty-six hours. In hospital patients, where we can control them, we can prosecute the administration longer, but I do not know a patient who can resist and will not resist after forty-eight hours. It is so repulsive that the taste is a factor in starting a rebellion, both in the stomach and palate of the patient.

Dr. Duff—Mr. Davis' remarks are certainly a revelation to me. As a rule, I have never experienced any trouble. I have had patients taking large doses, very large doses, of it for a week at a time without any bad results.

Dr. Batten—I have been in the habit of prescribing salicylate of sodium in rheumatism, and I have often continued it for two weeks, and I have never found any bad results from the taking of it, or any effect on the stomach, nor found that my patient objected to taking it. I have thought that salicylate of sodium was pleasant to take.

Dr. Kœnig, in closing the discussion, said: I desire to recall the attention of the society to a statement that I made, which has, judging from the discussion, apparently been overlooked; it is namely: That the antiphlogistic action was in-

itated by apomorphine, one of the most powerful depressants and emetics in the entire pharmacopœia, and it probably had much to do with the abrupt termination of the pneumonia. I want also to express my appreciation of the danger that is associated with the administration of large doses of heart sedatives; for that reason I made three visits to this patient in one day. No doubt what Dr. Rigg and Dr. Borland stated, that many other remedies will accomplish the same result, is true. There are many roads that lead to Rome, though some may be more direct or otherwise preferable than others. Aconite or tartar emetic will accomplish the same result; but if I were to give aconite in sufficient amount to accomplish what the veratrum viride and salicylate of sodium did, I would want to sit at the bedside of the patient. I have no doubt it is an excellent remedy, more rapid in its action, and perhaps even more certain, but unless closely watched, we unnecessarily risk the life of the patient. In veratrum viride there are two or more alkaloids, one of which is powerfully heart sedative, while another is emetic, but less markedly so than the heart sedative one; before, however, the sedation can go to a fatal limit the emetic action is established and the stomach emptied of its remaining contents.

Dr. Roger Williams read the paper announced for the evening on

POST-PARTUM HÆMORRHAGE.

I merely desire to call your attention to a few notes on the subject of post-partum hæmorrhage, with a view of presenting a subject of interest to all engaged in the healing art, and calling to mind the conditions that eventuate in the great hæmorrhages following delivery. There is no time when action is more promptly required, and knowledge and wisdom brought into play, than, when alone, one is brought into the presence of a post-partum hæmorrhage. It is unnecessary to present the picture, for one experience traces as with a stylus the tablets of memory more vividly and truly than ever artist's fingers wrought, and the whole play is necessarily so briefly enacted that we recall each incident, as we would describe a landscape seen in the lightning's flame. There is no emergency in the physician's life that gives less time for consultation and reflection, and no time more exacting to do the right thing, at the right time, and in the right way. Post-partum hæmorrhage is one of the most frequent complications of delivery. Call to mind, if you please, the many conditions you guard against in a labor about which you have doubt, and, in a vast majority, post-partum hæmorrhage is first to be feared.

There is something more than intuition that places one on

guard, for in the vast majority of subjects to this complication we find indisputable indices pointing to the subject in question. The patient, by reason of our wrongly-directed civilization and her whole surroundings, has engrafted a lax habit of body inviting uterine inertia, and, as a consequence, post-partum hæmorrhage. We find illustrations of this in the upper ranks of life, for they are most prone by reason of the demands of society. Education plays a part also, in inducing a premature and unhealthy development; and in support of this, I call to mind a home, almost palatial in its furnishment and surroundings, where a subject of post-partum hæmorrhage resided, and the intellectual food for thought was furnished by Boccacio and the Queen of Navarre. Comment is unnecessary, for the young ladies of that home, so surrounded at a period of life when quiet is most essential, the reading of such books is but the sowing of dragon's teeth, with the harvest in anticipation.

Among the causes contributing may be mentioned the site and size of the placental attachment. A placenta attached to the fundus may have slight uterine attachment, and the uterine sinuses closed by nature's processes. Where the placenta is thin and covers a great surface, we may have ecstasis of the uterine vessels, and, as a result, hæmorrhage. Local œdema, induced by perverted secretion and inflammation, may prevent contraction, and, as a result, we have immediate hæmorrhage. Complication to the funis, where it is interfered with and shortened, may cause a too rapid placental displacement, and therefore profuse hæmorrhage, even before the child is extruded from the maternal parts.

A few years ago I delivered Mrs. G.—a multipara—and the cord, besides being tied in a knöt, was entwined around arm and neck, and, during labor, the placenta was in part detached, causing a very great hæmorrhage. One peculiarity of this patient was her daily potation, which consisted of sixteen ounces of tincture of opium, which she obtained clandestinely, and managed to keep her vice secret, until her maid was invited into my office, and the liquid measured not only one time, but many.

Retained portions of placenta frequently cause post-partum hæmorrhage. I call to mind a case that occurred in my practice during my residence in Philadelphia. Mrs. S., four and one-half months in the family way, was pushed off the pavement by a swinging gate, and fell in a sitting position to the gutter. She promptly aborted, and as the placenta could not immediately be taken away, she suffered profuse hæmorrhage, which lasted until the placenta was expelled.

There may be a proliferation of the placental vessels con-

stituting an extra or supplementary lobe, and the retention of this even after the placenta is removed will cause profuse hæmorrhage. Plural births, with double placentæ, is not an unfrequent cause of post-partum hæmorrhage, for at times the uterus seems to be irresponsive to all our efforts, and a hæmorrhage beyond what we desired is the result. I call to mind a case in illustration: Mrs. G. was delivered of twins, and the delayed second delivery was caused by an inertia induced by a beginning cancerous growth. The last delivered child was in part covered by a fleshy mass not unlike placenta, and was born dead.

Laceration of the cervix is a cause of post-partum hæmorrhage not unfrequently. At times the structures of the uterine neck are hard and brittle, as well as unyielding, and, during labor, are apt to suffer to a greater or less extent. Mrs. W., a patient of mine, was delivered during my attendance at the A. M. A., at Nashville, and suffered an extensive laceration of the cervix, which was the immediate cause of an extensive hæmorrhage controlled by styptic injections and plugging.

Lacerations in the vulval canal are not unfrequently the cause of violent and prolonged hæmorrhage. Mrs. D., a primipara, was delivered by me in December last, and there was a band of tissue broad as a common lead pencil joining the labia minora, which had escaped my examination, and when labor was completed the torn end of this small impediment caused quite a hæmorrhage, which was, with difficulty, controlled by application of Monsell salt.

Growths within the uterus, even when too small to be detected during labor, are oftentimes the cause of alarming post-partum hæmorrhage. I saw a case of this character with Dr. McNeil, the history of which he has kindly furnished. Mrs. K., a German, aged 38, confined December 16, labor lasting twenty-four hours, antero-posterior diameter narrow, delivery with instruments, and nothing marked the labor out of the usual order until the eleventh day, when violent hæmorrhage occurred, keeping up until the patient was almost exsanguinous. Prompt injections of hot water with vinegar, and teaspoonful doses of ergot, relieved the hæmorrhage, and expelled a small fibroid, which was the cause of hæmorrhage. All went well until December 31, when, during one of the quick atmospheric changes, the patient had a chill, rise of temperature, and died with pneumonic congestion January 5.

As post-partum hæmorrhage is generally a preventable trouble, and where it often follows in a physician's path, rendering such an one open to censure for neglect or want of knowledge, I claim your indulgence in this paper which may

appear too long and tiresome—and yet we all have interest in a subject of such vital importance, not only to friends and family, but to ourselves, and this is my only excuse.

The character of a contraction has much to do with post-partum hæmorrhage. Admit we have a perfect contraction immediately after labor, if it is not permanent and tonic, the relaxation may induce a fearful hæmorrhage. Post-partum hæmorrhage and permanent contraction are incompatible I will admit, yet on examination one hour after labor and finding the uterus soft and flabby, and where coagula have not formed in the uterine sinuses, hæmorrhage will surely result. Nature has her own way of controlling hæmorrhage by contractility of the uterus, and by plugging of the orifices of the uterine sinuses; and to assist by art when nature fails is not an ignoble part the physician plays in attendance upon labor.

Not long ago, a physician left the bedside of a patient with violent post-partum hæmorrhage, with hurried directions to those who could not do what he should have done, in a fruitless quest for an instrument for transfusion. Had he gone for wings, in order that she might rise into the circumambient clouds, he should have been held less censurable, for when he returned life and hæmorrhage each had ended.

I need not speak of the secondary causes of hæmorrhage at great length, for that man who is not awake to the importance of the uterus worn out in a prolonged and exhausting effort in expelling the fœtus, or the uterus over-distended by excessive amounts of liquor amnii, or the consequences of a multiple birth, should not practise the obstetric art. Rapid emptying of the uterus is—excepting when filled with clots as a consequence of uterine hæmorrhage—baneful, jeopardizing and unskilful, and to do this to the over-distended uterus is criminal. The walls of an over-distended uterus are, to all intents and purposes, as paralyzed walls, and when the shock comes from relief of distention, it is the rule to expect retardation in contraction, and, as a result, hæmorrhage of a greater or less extent.

The law is individual, and not collective; and every mother is subject to the law controlling her case. True, there are principles governing, and likewise it is true we should be interpreters of the same, and should be ready at the instant to assist the tired and waning energies of the one harassed by the prolonged and exhausting pains of labor. But how many times is it true that we have hastened labor injudiciously, and reaped as the reward some complication that should not have existed.

The over-distended uterus should be relieved on the eve of

labor by careful and minute rupture of the membranes to allow the waters to slowly drain away. I know the ground taken is dangerous, but I am supposing judicious action, and there are examples of such action that have been praiseworthy to the operator, and to the one operated upon, helpful. I beg leave to cite an illustration: Mrs. P., enormously distended, a sufferer from ever-present pain, sleepless, and in constant dread lest she should never arrive at the day of accouchement, was advised to have the sac of waters carefully ruptured; for two days there was a constant flow, and at the end of that time she went into labor and was delivered of twins, one weighing nine and one-half pounds and the other eight and one-half. The uterus was firmly held for an hour to guard against hæmorrhage impending, and she made a rapid convalescence. An over-distended uterus is always a dangerous uterus, and should never be left until every indication is given that no emergency arises, especially as to hæmorrhage; for the greater number of deaths resulting from hæmorrhage during the last fifteen years in the Liberty Valley have been from this cause.

I am indebted to a brother practitioner for the following: Mrs. W., aged 28, delivered in November, 1891, labor normal, and of six hours' duration; uterus greatly distended by amniotic fluid; secundines removed without trouble. Four hours after labor, profuse hæmorrhage set in, leaving the uterus spongy and enlarged. Contractility of the uterus weak, and as the patient could not take ergot the hæmorrhage was kept in abeyance by injections of hot water for three hours, when it returned with alarming conditions. Clots were speedily removed and warm water injected, controlling the hæmorrhage, but the patient was exsanguinated, weak and exhausted. Digitalis and stimulants were freely used, but the patient died on the tenth day from complication referable to the lungs. There was not at any time septic trouble.

Irregular contraction is a cause of post-partum hæmorrhage not uncommon. Part of the muscular fibres are relaxed, whilst part are in a state of contraction; the former often over the placental site, and is the cause of considerable hæmorrhage. By palpation this condition is easily discerned.

Hour-glass contraction is also a cause of post-partum hæmorrhage; rare, it is true, yet nevertheless occurring. This condition follows often the obstetrician, who, by efforts of traction, excites uterine contraction at the seat of irritation—often the placental attachment, and many times the internal os, and, as a cause, we have a diaphragm temporarily placed, with placenta in part or wholly included within the uterus, and hæmorrhage of a greater or less extent resulting. This condition rarely, if

ever, follows after efforts of placental expression, and as this form of delivery of the after-birth grows into favor, hour-glass contraction grows less.

Encystment of the placenta is one of the rare complications of labor, and when it occurs, the placental site remains more or less paralyzed, whilst the remaining muscular fibres are in contractility. This form of trouble in the delivery of the after-birth is apt to be mistaken for adherent placenta, and oftentimes a part of it is left intra-uterine, as a result of wrongly directed effort, and hæmorrhage results, complicated at times by sepsis.

The placenta and membranes, and also the decidua, may be the seat of calcareous or fibroid degeneration, or the decidua may be abnormally thick. When an accident of this character to a part of the placenta or its membranes occurs, we have a cause of irritation not unlike a foreign body placed against the maternal tissues, and as a consequence, loosening of attachment in part, or an inflammation that causes adherent placenta. I think the many cases of adherent after-birth can be traced to one of the conditions mentioned; but, be this as it may, the hæmorrhage in this complication is not to be lightly considered, for the placental site is in a state of irritation, and its muscular fibres will respond freely.

Concealed hæmorrhage, following delivery, is a subject of interest to all. That fatal hæmorrhage of this character exists, many here will attest, and the obstetrician should ever be on guard. The flabby uterus, rendered insensible and worn out by long continued labor, may, by bleeding within itself, rob its subject of life. The external evidences of hæmorrhages may be normal, but where there is evidence of hæmorrhage the practised eye detects at once. The conditions leading up to this are referable to clots, and at times membranes acting as a valve within the internal os. Illustrative of this, I am furnished the history of Mrs. ———, delivered at Homewood, in the summer of 1891, who passed through a normal labor until the ninth day, when her physician was sent for, and found her pale, weak and bloodless. A syringe and hot water removed two quarts of clots. Phlebitis complicated the case, but the patient recovered.

Patients constitutionally **predisposed to flooding** are perhaps the most interesting of the class mentioned, and well merit the appellation of "bleeders." They follow the inclination of predisposition, in spite of every effort the physician puts forth, to a certain extent, and at times only mechanical pressure will relieve.

There are few sights more dreadful to look upon than

the worst cases of post-partum hæmorrhage. A reign of terror ushers it into view, and that one who is at his post, equal to the occasion, and to the emergencies that arise, has within him the elements of a hero. The pulse is a mere thread, or perhaps is imperceptible; syncope manifests itself, and with it is born a hope of thrombosis in the venous sinuses; and yet there may be fatal syncope. Intense weariness and faintness comes on, and the patient, wildly tossing her arms, is with difficulty restrained. Respiration becomes gasping and sighing, suffocation seems impending, and the patient calls for more air. The skin is deadly cold, the face pale, and covered with profuse perspiration. If the hæmorrhage is not controlled, loss of vision, jactitation, convulsions and death speedily follow.

The treatment of post-partum hæmorrhage, principally, should consist in using preventive measures. If the uterus is firmly held in contraction until the secundines are extruded, and the fundus held in the grasp of the hand until the first half hour is passed; if only, when assured that permanent contraction has manifested itself, the binder is firmly applied, and, if a full dose of ergot is immediately given, cases of post-partum hæmorrhage would be much less frequent. If the history of the patient is one of post-partum hæmorrhage, then a greater care should be taken. It will be well to administer subcutaneously, a half hour before the supposed termination of labor, a full dose of ergotine. If then the os is dilatable, and one has prepared for the emergencies that *might* arise, rupture the membranes, and take advantage of every means to insure regular and, if possible, permanent contraction.

If the pulse does not fall slightly below, or comes to the normal in twenty minutes after labor is completed, this in itself is indicative of impending hæmorrhage, and then prompt treatment of tendencies, especially referable to relaxation, demands the intra-uterine administration of remedies to control hæmorrhage. Ice, with uneven edges removed by immersion in hot water, carried to the fundus, and held until contraction is induced, or ice water—if the surrounding parts are protected—by injection, or water of the temperature of 120 to 130 deg., by the same means, and persisted in until contractions are invoked. Absolutely hot water favors coagulation in the uterine sinuses, and in those nervously disposed, is a form of treatment suited. It is supposed that subcutaneous injection of ergotine has been used, or that ergot in the form of fl. ex. has been given in sufficient quantities. Antiseptic wool carried to the bleeding surfaces is to be used, and in the selection of remedies there is the choice of dilute acetic acid, chloroform, or the mineral astringents. If a powder-blower is at

hand, and the parts admit, the use of pulverized nutgalls will serve a goodly purpose, and is a safe means of arresting hæmorrhage. The application of tr. iodine is also efficacious, and can be readily applied on wool. Strength of the patient must be maintained, compensation for the loss of blood looked after, and to this end injections of drachm doses of ether plays a part, with the inhalation of nitrite of amyl, or the injection of stimulants. Alcoholic-saline intravenous injection gives back tension, and supplies, in part, the fearful waste. These failing, the abdominal aorta can be compressed, or the uterus held firmly by the hand sufficiently long to aid in the formation of coagulæ.

Dr. Davis—The doctor has not only opened the discussion, but he has so very thoroughly covered the ground that it leaves little room for any one to add anything, but rather repeat in the way of emphasis some of the statements he has made. There is one cause of post-partum hæmorrhage that I did not notice being mentioned, that is the use of anæsthetics in labor. I believe it is the experience of all that the use of chloroform or any other anæsthetic in labor is very liable to leave the patient in such a condition that the normal stimulus of the last throes of labor are removed, and a lassitude follows the removal of pain, so it is a question as to how to resort to anæsthetics. It is necessary to be very careful in following all the details the reader has mentioned, in regard to the pressing down of the uterus and holding it pressed and keeping it in observation all the time until the patient has rallied, and I think where this precaution is not observed, there are many cases of hæmorrhage as the result; not always fatal hæmorrhage, but a hæmorrhage that would be avoided if these precautions were observed. The doctor has clearly outlined the magnitude and gravity of the diseased condition, because in a great majority of cases it is a diseased condition, a pathological condition, not a physiological one, and I know of nothing we are called on to attend that so alarms physicians and attendants as this. I recall the words of old Dr. Meigs when he so wonderfully demonstrated the condition.

He would show us in so vivid a manner the accident; he would then mention the remedies to use, and he said after you have used these you will throw up your hands and wish to the Lord old Meigs was there. I tell you, it has come to us all over and over again, when these patients seem in spite of all remedies to resist every endeavor to bring that uterus down, we do wish for help from any source or from every source. I would like to emphasize the hot water. It is one of the more recent ones, and it is one I have had experience with myself.

In hæmorrhage, where I have felt safe, I have introduced ice rapidly, large quantities and satisfactorily, but not so satisfactorily it seems to me, not so promptly and fully, as in the use of hot water. Most houses now, at least all well-to-do houses, have syringes of some kind, and if this water has been thoroughly boiled and cooled sufficiently for the purpose, it is disinfected by that means, and I think can be used safely in large quantities, and its action in causing contraction is very prompt, and even where that is not so prompt it does constrict the vessels and at least the hæmorrhage is controlled.

Dr. Thomas—There was one place in the paper where the gentleman spoke of rupturing the membranes. Teachers of obstetrics advise not to rupture the membranes, but I hold and have always advocated such practice. I think after labor begins the sooner the membranes are ruptured the better, and in a large practice of obstetrics, as a rule, I have followed it. To produce artificial labor the membranes are ruptured, so I hold that after the full period of uterine gestation has arrived, the membranes are in the road. There is one other point the reader spoke of, and that is to give large doses of ergot. Now I think that is a mistake. If you give large doses you produce an exaggerated contraction, and if you have that, you necessarily have following an exaggerated relaxation, so that in giving it to control hæmorrhage, it is better to give small doses and give them oftener. If there is anything that raises large beads of sweat on a man's forehead, it is when he attends a case of confinement, and after the delivery or before the delivery, he hears the blood rushing out. There is nothing in the entire practice of medicine that impresses a man more than that condition. Now you talk about ice, you talk about syringes and hot water.

If a man finds himself with such a case, how in the name of common sense is he going to run and get ice, inquire of the parties if a syringe is at hand, and if not rush to a drug store and get one? The way the hæmorrhage flows out, if you wait your patient will be dead before you have these things prepared. Sometimes you can almost tell that a woman is going to have a hæmorrhage; I have done that more than once. Where I suspect there is danger of hæmorrhage, I take precautions beforehand to have a pint or two of vinegar. I do not tell this in the hearing of the patient, but I tell them I want a pint of vinegar and a clean kerchief or a small towel, and if I have hæmorrhage of that kind, I roll the towel around my hand, saturate it with vinegar, pass it up the uterus, and I have never failed to constrict the vessels and check the hæmorrhage.

Dr. Blume—The subject of post-partum hæmorrhage is

certainly of importance to every physician. The doctor has fully given the different causes, as well as the treatment of this complication. I wish in the first place to call your attention to one point—to the question—is it possible to prevent post-partum hæmorrhage? My answer is, the proper management of the third stage of the labor will render these accidents extremely rare. Unfortunately there is still a diversion of opinion as to what is the proper treatment in the third stage of labor. Some writers say the uterus must be grasped and firmly compressed as soon as the head emerges; some insist upon compressing the fundus as soon as the child is delivered. Some say it must be done about fifteen minutes after the delivery of the child; still others leave the separation of the placenta and its expulsion through the contraction-ring to the powers of nature. If you do this you do not need to be afraid of post-partum hæmorrhage; there will be very little blood lost under these circumstances in a very great majority of cases. It would lead me too far to demonstrate to you that this last view is the correct one. The observer will find that there is very little loss of blood, in some cases almost nothing; he will also find that the uterus remains more contracted if this plan has been followed.

As Dr. Thomas said, ergot, especially large doses of ergot, has the effect of over-stimulating. About three or four years ago I published a paper on this subject, and especially about the third stage of labor. I have not had one case of post-partum hæmorrhage within the last eight or nine years, since I have been following this plan of treatment of the third stage of labor. I say of post-partum hæmorrhage, and I exclude all those hæmorrhages which arise from lacerations. As regards the treatment, I again agree with Dr. Thomas, that it is often impossible to use cold or hot water. You have not the time to do it. If it is some mild form of hæmorrhage, compression of the fundus will arrest it; if it is a serious hæmorrhage, you lose too much time before you have it ready. If I had it to do, I would simply introduce my hand into the uterus, take the other hand and grasp the fundus and make a compression of the uterus. I think very few cases will resist this treatment. The best result has been obtained in various cases by tamponing the uterus and vagina with iodoform gauze.

Dr. Batten—I venture to say that if any of us had a case of post-partum hæmorrhage to-night, we would not likely do anything that has been recommended, because we have not the appliances nor have we the time to wait. I believe that the husbanding of the second stage of labor to prevent post-partum hæmorrhage is as important, if not more important,

than the third stage of labor. In my career I have had but two cases of post-partum hæmorrhage. One was not a very bad case. The other was a very bad case, and the woman finally died. I was not there at the time the child was born, nor for an hour afterward, and when I arrived at the patient's side I found her *in articulo mortis*. I had attended her in three previous births. In another case of post-partum hæmorrhage, a case I saw with another physician, we governed the bleeding by each alternately holding or pressing the womb well down in the pelvis and giving ergot. The moment either of us would take the hand off the uterus it would become flabby. I am a great advocate of the rapid delivery of the after-birth when the second stage of labor is complete. It is very important that the clots and all the membranes that might remain in the uterus be removed, and the womb should be well contracted before putting on the bandage. I would object to giving ergot in any shape, either by injection or by the mouth, before the child is born, because I think it would lead to difficulties afterward that might otherwise be avoided.

Dr. Kœnig—I want to say a word in favor of that much-abused remedy, ergot. According to my understanding, the difference between ergot and the natural contraction is that the contraction by ergot is continuous. If you get the uterus contracted by large doses of ergot it does not relax. I myself have seen very few cases of serious post-partum hæmorrhage. I am sure, however, that if I had ergot at hand, I would give at least half an ounce of the fluid extract as soon as the manual manipulations should have succeeded in bringing about contractions, and time could be spared to administer the medicine.

Dr. Macfarlane—There is just one thing I wish to speak of—the matter of ergot. It was thought it should be given in all cases, and I think there are those who rely upon ergot to the exclusion of other things. I agree with Dr. Blume that the proper way of treating a post-partum hæmorrhage is to induce contraction of the uterus by the introduction of one hand into the uterus and placing the other one upon the fundus. I think the presence of the hand in the womb is sufficient. There is one thing I wish to commend to those who have not done much such work, that the doctor has made mention of in this paper, that is, the significance of a quick, rapid pulse.

Though quick and rapid, you may not have a post-partum hæmorrhage in the true sense of the word, but you are going to have a uterus that will relax again and fill with clots and give you trouble; and there are those who give ergot under these circumstances, and especially beginners will give the patient a dose of ergot. The proper thing to do is to empty the

uterus with a few fingers, and usually the contraction will be sufficient to check such hæmorrhages without any ergot at all. Mention has been made of the binder, and I know people who put it on with as much regularity as they say their prayers at night. I think with the average woman, by the time you raise her up and have the binder put underneath her, you will do more harm than good. Even in hæmorrhages of any kind it is not a custom with me to put on the binder. Once you have the uterus contracted, and you remain by your patient a length of time to assure that it is permanent, I do not think there is any occasion for the binder.

Dr. Thomas has stated here that the proper thing to do under any and all circumstances, if full term has arrived, is to rupture the membranes. I wish to take exceptions to it. A labor can be carried through to such time as it will rupture of its own accord, with much more comfort, and it is certainly easier on the mother's part to have a soft bag than a resisting bag.

Dr. Murdoch—No man should introduce his hand into the uterus, unless for some such grave accident as this post-partum hæmorrhage, and only then when the post-partum hæmorrhage threatens to be fatal. I mention this because the matter was vividly brought to my mind last night by a young practitioner, who told me that two weeks ago he attended a case in which there was post-partum hæmorrhage, and for the purpose of arresting it he called for a syringe, and he injected it with hot water and arrested the hæmorrhage; but in a few days the woman was taken with fever and died within a short time of septic poison.

Now, if this goes abroad that in cases of post-partum hæmorrhage, the practitioner is at liberty to take a cloth or towel and wrap it in his hand and saturate it with vinegar and push it into the uterine cavity, practitioners who have not had as much experience as Dr. Thomas has, get to think that is the proper course to pursue.

Some of them may think that the loss of a few ounces of blood after delivery justifies them in the use of some such means to arrest the hæmorrhage, and they may for a trivial trouble introduce that into the system of a woman which may cause her death. It is a serious matter to introduce the hand into the uterus, and in injecting hot water in a hurry, nine times out of ten you will not get water that is boiled, but that which is filled with septic matter; and you may, for the purpose of arresting a hæmorrhage that will not prove fatal, inject it in the system and probably cause the woman's death. I believe that, generally speaking, the hæmorrhage can be arrested without

such means, but there are occasions where it is probably justifiable, and I have myself resorted to it. I am a believer in hastening the third state of labor; I believe in doing it according to the method of Crede. I also agree with Dr. Macfarlane that the binder is an obsolete means of producing pressure, and is not worthless, but worse than worthless—it is a nuisance.

Dr. Duff—I can not help allowing the words of Prof. Hersh to ring in my ears: “Where a second case of post-partum hæmorrhage follows a man, he is certainly ignorant or guilty of negligence.” When I say this I do not for a moment entertain the belief that cases of post-partum hæmorrhage are not a necessity in almost, if not every man’s practice; not inevitable, but they should not be frequent, if proper precautions are taken. There have been remarks here to-night suggesting the impossibility of having proper instruments at hand. One certainly has a right to speak disparagingly of a physician who goes on his round day after day and night after night, waiting on the mothers of our land, without having himself provided with these instruments and remedies which may become necessary in the course of his practice, without time to run around and hunt them up; and hence while a physician does make a very great display when he has a table in the room and places his instruments upon it, which I would condemn to a certain extent, he is certainly practising obstetrics according to the line of his duty, in being prepared for emergencies. Coming to the subject of post-partum hæmorrhage directly, the doctor did not illustrate the difference between the different characters of post-partum hæmorrhage, and in the discussion almost all have spoken of post-partum hæmorrhage which comes from the detachment of the placenta. Hæmorrhages from laceration are of different character, and it is very important that we recognize this difference. I know of a woman who died not five miles away from here, because her physicians did not recognize the fact that the hæmorrhage they were endeavoring to control did not come from the uterus, but from laceration.

They kept the uterus pressed down, kept it contracted and applied lemon juice and hot water, but the hæmorrhage went on and the woman died; whereas if they had recognized the true condition and taken hold of that uterus and sewed the rent, they could have saved her in all probability. Now, with regard to the treatment, the doctor did not distinguish between contraction and retraction, as an element in post-partum hæmorrhage. We have contraction and retraction, and if you have plenty of contraction and not any retraction, you will still have hæmorrhage from the uterus. With regard to the use of ergot, it will produce contraction, but it does not produce re-

traction, either of the muscles or the blood vessels, and when the contraction passes off, not having retraction, you are a little more likely to have hæmorrhage than if you had not given ergot.

There are some methods of treatment of post-partum hæmorrhage that have not been mentioned. The condition of the patient must be taken into consideration, as has been stated by some one, outside of the condition of the uterus. If hæmorrhage came on, I would take the forceps and pull the uterus down, and with a pair of forceps I would take gauze and push it up into the uterus, and the hæmorrhage in ninety-nine cases out of one hundred would cease. I would never hasten to turn the uterus inside out, as do Koch and others. Another thing to be done is to make pressure. I believe that Beringer and Foster advocate pressure upon the abdominal aorta, one through the uterus and the other the abdominal walls, and forcing all the blood that remains in the woman's body up to the brain as much as possible. The subject is a very interesting one to me, and I feel of all the operations we undertake there is none in which we must be braver, bolder and more determined and more active.

Dr. Williams—I do not intend to take much of your time. In regard to the criticism of Dr. Thomas, I did not state any dose of ergot; all I suggested was the injection of ergotine, when we anticipated in a few minutes to half an hour labor would be over to get the effect of ergot. In regard to the use of ergot, I am a firm believer in its value, that it will produce contraction. Some criticisms have been made on the binder. I mentioned that after you were assured that you had permanent and constant contraction, the application of the binder would more firmly hold the uterus to its place, not to immediately apply the bandage.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

SYMPHYSIOTOMY, WITH THE REPORT OF AN OPERATION.

By BARTON COOKE HIRST, M.D.

Symphysiotomy has as remarkable a history as any procedure in surgery. Suggested for the first time in the Surgery published by Pineau in 1598, and first performed upon a living woman in 1777, the idea may be said to be 300 years old, while its practical application dates back more than a century.* From the year of the first operation, until 1858, symphysiotomy was performed eighty-five times in different parts

* R. P. Harris: Amer. Syst. of Obstet., Vol. II. p.—.

of the continent of Europe and once in England with a mortality of 33 per cent. The frequency of the operation diminished after the first few years, until in 1858 it had practically died out. It was revived, however, in Italy in 1866, and in the succeeding twenty years seventy operations were performed, with a mortality of 24 per cent. Italy continued to be the exclusive field of the operation until a year ago, when it was again tried in Paris by Pinard, whose interest in it was aroused by a visit of Spinelli from Italy. Ten operations have since been performed in Paris, two in Dresden and one in Strasburg. From January 1, 1886, there have been fifty-two operations, with only a single death, due to septic infection before the operation was undertaken. Twenty-three symphysiotomies have been done already this year, and the last thirty-four women have all recovered.

We owe the introduction of symphysiotomy in this country to Dr. Robert P. Harris, who, as is well known, has long been interested in the subject, and at the recent meeting of the American Gynecological Society in Brooklyn read a paper tracing the development of the operation, showing by the most laboriously collected statistics the present brilliant results achieved by it, and demonstrating, by the description of typical cases, its utility in labors otherwise insuperably obstructed by a contracted pelvis.

Ten days after Dr. Harris' paper was read, on September 30, the first operation in this country was performed by Dr. Charles Jewett, in Brooklyn. Three days later it was again performed at the Maternity Pavilion of the University Hospital in this city.

The position of symphysiotomy is now established beyond a doubt. Its modern revival I believe to be the most important advance in obstetric surgery since the general adoption of abdominal section for the treatment of early extra-uterine pregnancy. It is applicable in contracted pelvises with a conjugate over 67 mm., and, therefore, the method should be employed in almost all cases of the kind in this country, for a greater contraction of the pelvis is rarely seen among us. It should, moreover, almost entirely displace the cesarean section for a relative indication. It is a much simpler, an easier, and a safer operation. This is also the opinion of Leopold, who can not be accused of prejudice against cesarean section, with his brilliant record in that field.

There is and will be for some time, perhaps, an objection to the operation from those who have no experience with it on the ground that sufficient space can not be thus gained. In answer to this objection is the fact that the pubic bones may

gape 7 cm. after their separation, and the statement of Morisani, that the conjugate is thereby increased from 1.3 to 1.5 cm. But an absolutely conclusive answer is furnished by the subjoined clinical records of some typical cases.

*Leopold's First Case.**—A dwarf, 135 cm. tall, with the following pelvic measurements: Sp. il., 22 cm.; cr. il., 24 cm.; tr., 28 cm.; conj. ext., $17\frac{1}{2}$ cm.; conj. diag., $8\frac{3}{4}$ cm.; conj. vera, $6\frac{3}{4}$ cm. She had been delivered thrice previously, twice of dead children, once by the induction of premature labor. After a labor of seven hours and twenty minutes, ushered in by rupture of the membranes, symphysiotomy was performed with the head above the brim. In ten minutes the child was extracted with forceps. The head was of normal size (transverse, $9\frac{3}{4}$, $8\frac{1}{4}$; circ., 34).

Leopold's Second Case.†—A woman, delivered once before by craniotomy. The pelvic measurements were as follows: Sp. il., 22; cr. il., 25; tr., $30\frac{1}{2}$; conj. ext., 16; conj. diag., $8\frac{1}{2}$; conj. vera, $6\frac{3}{4}$. Labor began in the evening; membranes ruptured seven hours later; operation three hours later with head above the brim. Extraction of the child in ten minutes with forceps. The head had a circumference of $35\frac{1}{4}$ cm.

Porak's Case.‡—A primipara with rachitic pelvis, conjugata diagonalis being 9.6 cm., and pelvis presenting some asymmetry, very likely from scoliosis. Labor began on June 10. About twelve hours later the membranes ruptured, and from eight to ten hours afterward the os was completely dilated. The head rested above the brim of the pelvis. Forceps was applied, but all efforts to engage and extract the head failed. The symphysis was opened, and the head then extracted "with the greatest ease" by forceps. Recovery.

Freund's Case.§—A woman, in labor six days; water drained off for two days. After opening the symphysis the head was delivered in fifteen minutes without instruments. There were two previous deliveries, one of a dead and one of a living child. The pelvic measurements were: Sp. il., $24\frac{1}{2}$; cr. il., 27; tr., 31; conj. ext., $18\frac{1}{2}$; conj. diag., 10 cm.; conj. vera, $8\frac{1}{4}$. The child's head after birth was found unusually large and hard. B. T., 10 cm.; B. P., 11 cm.; F. O., 12 cm.; M. O., 14 cm.; S. B., 10 cm. Circumference, O. F., 37 cm. Recovery.

Jewett's Case.¶—The first symphysiotomy in America, performed by Dr. Charles Jewett, of Brooklyn, September 30, 1892. Woman, a native American, primipara, fell in labor

*Centralbl. f. Gyn., 1892, No. 30.

†Centralbl. f. Gyn., 1892, No. 30.

‡Annales de Gynécologie, September, 1892.

§Muellerheim: "Ueber die Symphysiotomie," Centralbl. f. Gyn., 1892, No. 30.

¶Personal communication.

September 30, 1 o'clock A. M.; at 10 A. M., the occiput appeared at the vulva, but was held fast by an approximation of the ischiac tuberosities, reducing the bischiac diameter to three inches. Nine hours later Dr. Jewett first saw the patient. The forceps had been vigorously used in vain. Symphysiotomy was performed two and one-half hours later, or eleven and one-half hours after the impaction of the head at the outlet. Delivery was affected by supra-pubic pressure and by shelling the head out with the fingers in the rectum. The woman is now in good condition, but unfortunately the child died twenty-four hours after birth, from the compression to which the skull had been subjected during its long impaction in the pelvis.

The University Maternity Case.—A German woman, aged 19, pregnant for the first time, was admitted to the University Maternity September 24. The examination by the resident physician and the students showed the child to be presenting by the head, the back to the right. The pelvic measurements were: Sp. il., 25 cm.; cr. il., 27 cm.; tr., 30½ cm.; conj. ext., 18 cm.

The internal examination made by myself just before operation showed the conjugata diagonalis to be 9½ cm.; conj. vera, 7¾ cm. The girl fell in labor Saturday morning, October 1. The pains, recurring all day, on Sunday became very vigorous. On Monday morning, when my attention was first called to the case, the contraction-ring was high, the uterus stood almost straight out from the body, and the child's head was movable above the superior strait. The membranes were unruptured. By no justifiable degree of force could the head be made to enter the pelvis. The fetal heart-sounds were good. It was evidently, therefore, a choice of cesarean section, craniotomy, or symphysiotomy. The last was done, with the assistance of Dr. R. C. Norris and the valuable advice of Dr. R. P. Harris, who kindly consented to be present. The child was delivered with forceps in one hour and four minutes from the time the operation was begun. I purposely took my time, for the os was only the size of a dollar, and was very rigid, so that a more rapid extraction would have seriously injured the cervix. Head measurements: B. T., 7½; B. P., 9; F. O., 12; M. O., 13½; circ., 34. Mother and child are well.

The technique of symphysiotomy is simple and easy. After thoroughly cleansing the field of operation and disinfecting the vagina as well, a short vertical incision is made on the abdominal wall, reaching to about three-quarters of an inch above the symphysis. The attachments of the recti muscles are severed just sufficiently to admit one finger. The forefinger of the

left hand is passed under the symphysis, and upon this as a guide the curved knife of Galbiati is inserted until its beak projects under and in front of the symphysis. The joint is then cut upward and outward. To avoid injury to the urethra, a metal catheter is inserted and pressed by an assistant downward and a little to the right, while the knife is placed a little to the left; but with Galbiati's knife I should think that there is little likelihood of cutting the urethra or the plexus of veins in its neighborhood. I at first thought that an ordinary probe-pointed, curved bistoury would serve my purpose well enough, but I quickly laid it aside, and was glad to avail myself of Galbiati's knife, which I happened to possess—at the time one of the three, I believe, in the country.

As soon as the joint has been severed the wound should be covered with iodoform gauze, and then the child extracted with forceps, or allowed to be delivered naturally, as seems best in the individual case. I should, I think, almost always prefer the forceps. It is well to have the trochanters supported by assistants during the passage of the child through the pelvis, so that the sacro-iliac joints shall not be injured.

As soon as the delivery is completed the wound is sewed up, the lowest stitch, if desired, passing through the top of the symphysis. How the whole symphysis can be stitched up, as Leopold claims to have done, I do not understand. After closing the wound and dressing it, rubber adhesive strips are placed around the hips and lower abdomen, and a tight binder applied. The symphysis unites surprisingly soon, and three weeks after the operation the patient can walk as firmly and as well as ever.

There is only one disturbing thought in connection with the introduction in this country of an operation destined to do so much good. The charge of superficiality lies with some justice against us. We are too ready to reach out toward the top without a sufficient basis of solid preparation, and I fear that symphysiotomy may be undertaken by many who can not correctly measure a pelvis and who have not the experience to decide whether a head can pass through the pelvis in which it is about to enter or in which it is engaged. There is consolation, however, in the reflection that if symphysiotomy should be done needlessly the results are not likely to be so disastrous as in the case of cesarean section, which, to my knowledge, was done several times unnecessarily during the excitement produced among medical men by the improved results of the Säger operation.

A CLINICAL DESCRIPTION OF DYSENTERY AS IT OCCURS IN NICARAGUA.

By JUDSON DALAND, M. D.

Three varieties of dysentery are met with in Nicaragua, namely, the malarial, the endemic, and the epidemic, and of these the malarial is by far the most common. The prodromal symptoms of malarial dysentery are malaise, pain in the back, in the head, and in the umbilical region, extending toward the pubes. In association with the diarrhœa these pains are highly characteristic of this form of dysentery. Mild cases are marked by very slight febrile and circulatory disturbances; whereas, in the more severe cases we have a moderate elevation of temperature, varying between 102 and 104 deg. F. The stools are at first composed almost entirely of pure mucus, are small in quantity, and are frequently attended by tenesmus; soon the mucus is streaked with blood. The pains are not usually severe during the act of defecation, but the pain in the head and back is excruciating. Liver complications are not infrequent, particularly acute hepatitis or acute hepatic engorgement, each of which is frequently associated with jaundice. Hepatic abscess is a rare complication and is usually secondary to the ulceration of the colon. At times the spleen becomes greatly engorged.

Changes in the urine, indicative of kidney disease, probably exist, but chemical and microscopical examinations are rarely made from lack of proper instruments and reagents. Many of these cases of malarial dysentery are followed by intense anæmia and debility, lasting for several months.

When cases are seen early and promptly treated, the prognosis is almost uniformly favorable, but when seen late they usually die. As post-mortem examinations are never permitted, no information exists regarding the morbid anatomy or pathology of this interesting disease. The *amœba coli*, if searched for, would be found in many of these cases.

The treatment found most successful by Dr. Bermudez, of Managua, Nicaragua, is as follows: To an adult is given six grains of quinine morning and evening, in conjunction with—

℞ Ammonium chloride.....	gr. v.
Pul. ipecac	gr. v.
Tr. opii	gtt. x-xv.

To be repeated every two hours.

The amount of laudanum is determined by the severity of the pain. When the pain is particularly severe and obstinate, morphine is superadded, and, in cases marked by debility, it is customary to substitute the carbonate for the chloride of ammonium in five-grain doses, every two hours, day and night.

In the way of food nothing is permitted except milk or milk and lime-water, to which sago may be added. The patient is allowed to drink freely of cool water, thus alleviating the intense thirst which is usually present. Ice water is considered harmful.

The *second* variety, known as endemic dysentery, resembles the preceding, but is very much milder, and is usually unattended by the fever or the severe pains in the head, back, extremities or abdomen that characterize the malarial form. The stools are composed of feces mixed with mucus and blood; are less frequent, and the tormina and tenesmus are less severe.

The average duration of malarial dysentery is three weeks, but occasionally it has been known to last two months, while very mild cases run their course in two weeks.

The treatment for this variety is the same as for the malarial, with the exception that the quinine is omitted. Almost all cases recover, and complications or sequelæ are uncommon.

The *third* variety recognized is called epidemic dysentery, which, as a rule, comes on suddenly, with pains in the head, back, throat and extremities, accompanied with severe abdominal pains, shooting in character and centring at or about the umbilicus. Headache is particularly complained of; and not infrequently nausea and the vomiting of bile are associated. From the first the discharges are bloody, frequent, and there is intense pain and tenesmus. There may be as many as 150 evacuations in the twenty-four hours, and an ordinary case may average twenty-four in the twenty-four hours, or one hourly, day and night. The temperature is high, ranging from 104 deg. to 106 deg. F., with a morning remission of two degrees, at which time there may be moderate perspiration. Severe cases die in less than seven days, and favorable cases may recover in from two to three weeks.

The discharges from the intestines continue bloody throughout the disease, but change in color, becoming dark and sometimes black from decomposed blood pigment, and frequently they are viscid and tenacious from admixture with mucus.

At times the patient becomes delirious, and occasionally coma supervenes. Children often develop twitching of the muscles, rolling of the eyes, and there is a tendency to bury the head in the pillow.

The complications usually noted are hepatitis, jaundice, and abscess of the liver. Usually so soon as hepatic complications occur the patient dies; in other cases epidemic dysentery is complicated by croupous pneumonia with rusty sputum, and it usually affects the base of the right lung. Now and then severe internal hæmorrhages occur, and such an accident

explains the cause of sudden death which has been occasionally observed. In this form of dysentery the anæmia and debility are more marked than in the malarial form, and is more persistent. Not infrequently the patient suffers from obstinate constipation, due to stricture resulting from the healing of large and deep ulcers in the colon.

The cases are best treated by the administration of from ten to twenty grains of quinine given three times daily, and in addition chloride of ammonium, five grains; pulverized ipecac, five grains; and tincture of opium, ten to fifteen drops, repeated every two hours. Frequently, however, there is so much gastric irritability that these remedies are not retained, and in such cases the quinine is continued, but the chloride of ammonium and ipecac mixture is omitted, and fifteen grains of bismuth or five grains of tannic acid repeated every two hours, is substituted. When opium is indicated it is invariably administered in the form of the tincture, in doses of five to fifteen drops, repeated every two or three hours, according to the severity of the case. At times nitrate of silver, in doses of one-sixth or one-eighth of a grain in pill form, is given every three hours. If the astringents mentioned prove of no avail, recourse is had to the acetate of lead, in doses of two or three grains every three hours. Most cases require stimulants, and experience has shown that alcohol in the form of brandy or whiskey is *inadvisable*, and that the best results are secured from the use of sherry, port, or any of the red or white wines, associated with the carbonate of ammonium, in ten-grain doses repeated every three hours.

The food is restricted to milk and lime water, sago and farina. Not infrequently Dr. Bermudez has seen as many as 100 cases in two months with the mortality of but 2 per cent., and his father would probably see as many as 200 cases in the same length of time.

Dysentery is one of the most common diseases of Nicaragua, and typical examples of the disease may be seen any day in the year. Most cases of malarial dysentery are observed during December, January and February, while the epidemic variety occurs more frequently during the months of March, April and May. Of course, epidemic dysentery is always present, and, as would be naturally expected, is equally prevalent at all seasons. The malarial form prevails chiefly in low, marshy districts, during the hot months. It is well to remember that the dry season, which corresponds to our summer, begins in November and ends in April, the remaining months constituting the Nicaraguan winter, or wet season. The maximum temperature in the dry season is from 95 to 98 deg. There is a differ-

ence or at least 10 deg. between the temperature of the day and that of the evening.

The contagiousness of epidemic dysentery is fully recognized, and all ordinary precautions are taken to prevent the spread of the disease. Isolation, the free use of carbolic acid, the burial of all discharges, especially fecal and urinary; the burning of the linen soiled by the discharges; and in cases where the patient is too poor to submit to the destruction of the clothing by burning, they are disinfected by boiling water.

In all of these cases no researches have been made regarding the presence of the *amœba coli*.

Nicaragua has excited much interest of late, particularly in view of the probability that in the near future the Nicaraguan canal will become a reality, which will bring it into intimate relations with the entire world. I have, therefore, ventured to record these observations regarding a disease which prevails constantly, and at times becomes contagious.

My thanks are due to my friend and student, Dr. Salvador Bermudez, and to his father, who has practised in Nicaragua for more than thirty-five years, for the description of dysentery as it appears in Nicaragua, and for the treatment which has given them the best results. The enormous experience of the physicians of Nicaragua has heretofore never been known to the medical profession, insomuch as they have no medical magazine to which they could report their observations; and moreover, at no time has it been their custom to carefully note the cases under their care; so that this report is of particular value, and is, perhaps, the first of the kind published in the English language. It is especially worthy of note that the greatest confidence is placed in the use of the chloride of ammonium, and that this is their uniform practice. I would, therefore, suggest that it be employed in the United States, especially in the Southern States, where the climate more nearly resembles that of Nicaragua.

PRELIMINARY PROGRAMME OF THE SESSION OF THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

The above session will be held in Louisville, Ky., November 15, 16 and 17, 1892. Members of the medical profession are cordially invited to attend.

PAPERS TO BE READ.

The president's annual address, J. McFadden Gaston, M. D., Atlanta, Ga.

Cervicitis, Bedford Brown, M. D., Alexandria, Va.

Surgical treatment of endometritis, A. Vander Veer, M. D., Albany, N. Y.

Experiences in pelvic surgery, A. V. L. Brokaw, M. D. St. Louis, Mo.

Craniotomy upon the living foetus is not justifiable, Cornelius Kollock, M. D., Cheraw, S. C.

A case of extensive hematocele resulting from tubal pregnancy rupturing into the broad ligament, W. D. Haggard, M. D. Nashville, Tenn.

Fibroid tumor of uterus—pregnancy—rupture at fourth month—operation six weeks afterward—death, S. M. Hogan, M. D., Union Springs, Ala.

A contribution to the study of abdominal pregnancy, H. C. Coe, M. D., New York City.

Tubal pregnancy, Joseph Price, M. D., Philadelphia, Pa.

Some kidney operations, with remarks, Geo. Ben. Johnston, M. D., Richmond, Va.

Surgical treatment of inguinal hernia in the male, Henry O. Marcy, M. D., Boston, Mass.

The symptoms of fractures—their importance and significance, W. C. Dugan, M. D., Louisville, Ky.

The part that rectal diseases play in women, J. M. Matthews, M. D., Louisville, Ky.

Poisoning by the bite of the southern spider, J. T. Wilson, M. D., Sherman, Texas.

A plea for more rapid surgical work, Ap. Morgan Vance, M. D., Louisville, Ky.

Specialism as related to the practice of gynecology, Wm. Warren Potter, M. D., Buffalo, N. Y.

The relation of the general practitioner to gynecology, R. M. Cunningham, M. D. Birmingham, Ala.

Morphology of abdominal tumors, Howard A. Kelly, M. D., Baltimore, Md.

Modern researches in relation to the surgery of the genito-urinary organs, G. Frank Lydston, M. D., Chicago, Ill.

Amputation of breast for malignant disease, H. Horace Grant, M. D., Louisville, Ky.

Fecal and other fistulæ following abdominal section, Joseph Taber Johnson, M. D., Washington, D. C.

Nature of shock and allied conditions, Wm. C. Dabney, M. D., University of Virginia.

The present status of drainage in surgery, A. Morgan Cartledge, M. D., Louisville, Ky.

Cholecystotomy, with the report of a case, Edwin Ricketts, M. D., Cincinnati, Ohio.

Treatment of stones in the biliary ducts, W. E. B. Davis, M. D., Birmingham, Ala.

Personal recollections of Dr. Benjamin W. Dudley and his surgical methods, Bedford Brown, M. D., Alexandria, Va.

Intestinal anastomosis without mechanical devices—circulo-lateral enterorrhaphy, J. D. S. Davis, M. D., Birmingham, Ala.

J. McFADDEN GASTON, M. D.,
W. E. B. DAVIS, M. D.,
Secretary. *President.*

NEW YORK ACADEMY OF MEDICINE.

SECTION ON ORTHOPEDIC SURGERY.

Stated meeting October 21, 1892. Henry Ling, M. D., Chairman.

PSEUDO-HYPERTROPHIC PARALYSIS.

Dr. L. W. Hubbard presented a case of pseudo-hypertrophic paralysis, which, although not exactly orthopedic, might not be entirely without interest in connection with the paper of the evening. It was also more than usually interesting, as the condition is ordinarily not seen until a later stage. The boy had probably had the present trouble since he was 5 or 6 years old. He did not begin to walk until he had reached the age of 2½ years, although all the other children in the family began walking at 13 months. His general health has been quite good, but the parents noticed that he could not run around. At present he stands in a position of lordosis, with his feet well apart; there is a slight ankle clonus, and absence of the patellar reflexes; muscular weakness is noticeable in the anterior part of the thigh. So far, the electrical reactions are negative. When he runs he throws himself from side to side.

Dr. N. M. Shaffer said he had examined the case when it first applied for treatment at the Orthopedic Dispensary, and at that time he made a diagnosis, by exclusion, of pseudo-hypertrophic paralysis, and Dr. M. A. Starr, who saw the case in consultation, also considered it to be in the atrophic stage of this disease. The speaker said he could distinctly recall having seen two or three such instances, where all the signs of the hypertrophic stage were subsequently developed; in one family three children were all affected in the same way but careful inquiry failed to elicit any evidence of hereditary influence.

Dr. A. B. Judson had observed cases in two families; in one, two brothers, and in the other, a brother and sister were affected. These, and similar observations by Dr. Poore and others, indicated that heredity is to be considered in the interesting but still unanswered question of etiology. He recalled an incipient case in which a previous diagnosis of Pott's disease had been based on the peculiarity of gait and an apparent spinal disability in rising from the recumbent position.

The chairman had known of a number of instances in which several members of one family had been affected in this way and he thought it was common to find that they were usually late in learning to walk. He had nothing new to offer in regard to the etiology.

RACHITIC PSEUDO-PARALYSIS, AND ITS TREATMENT,

was the title of a paper read by Dr. S. Ketch.

The author dwelt particularly on the importance of recognizing this condition, and gave its differential points, as distinguished from infantile paralysis, and the paraplegia of Pott's disease, with which it was most frequently confounded. He mentioned many other conditions which this condition resembled, and which it had been mistaken for, such as spastic paralysis, post-diphtheritic paralysis, and even pseudo-hypertrophic paralysis. The clinical features were given, and corroborated those already described in Dr. H. W. Berg's paper, read before the section some years ago, and which the author thought had not been sufficiently appreciated by the general practitioner. The question of the occurrence of deformity with this pseudo palsy was brought out. The author thought that in many cases there was no deformity, as the children had never walked, and the superincumbent weight had not acted as a factor in the production of bow-legs and knock-knee. He had observed cases, however, that had deformity present. Some of these were probably cases of "fœtal rachitis," and some, where the muscular condition came on after the child had already walked.

As to treatment, he advised primarily regulation of the diet, baths and general hygiene. Medicinally stress was placed on the use of phosphorus. Locally, electricity and massage, and inunctions with cod liver oil, were recommended. The question of the use of "braces" was gone into thoroughly, the author being of the opinion that their use is unjustifiable, while the muscular weakness remains, and prefers to wait until a later period, should deformity be present, when it can be remedied either by mechanical or operative means.

DISCUSSION.

Dr. Shaffer said that quite recently he had seen a case of rachitic kyphosis, which had been referred to him by an eminent medical practitioner on the supposition that it was a case of Pott's disease, and not long ago a case of rachitic paralysis had been sent to him with a diagnosis of double hip joint disease. He would only add to the points in differential diagnosis, so well laid down, that the hyperæsthetic stage of true poliomyelitis anterior is very like the tender condition of the muscles which we find in rachitic paralysis. He had seen, in the course of a few weeks, five or six cases of poliomyelitis anterior in the very early stage, and in two or three of them this hyperæsthetic condition was present, and closely simulated pseudo-rachitic paralysis. One without much experience might very readily mistake the tender stage of the rachitic condition for the hyperæsthetic stage of infantile paralysis. The differential diagnosis between the rachitic curve of the spine and the curve of Pott's disease is readily made by the ease with which the spine can be made to describe the normal motion, and also by the diminution or disappearance of the kyphosis by placing the child in the recumbent position. Still, it must be remembered, that rachitic curves do show some spinal rigidity on attempting to hyper-extend the spine. The importance of this subject to the general practitioner is well shown by the case of a little girl in St. Luke's Hospital, in which flexion and extension of the thighs were limited, as was also inward rotation during flexion. The child complained of pain, and her general condition closely simulated the first stage of hip joint disease. This pseudo-rachitic muscular condition is not accompanied, in the majority of cases, by deformity, but the symptoms precede the stage of deformity. As soon as the muscular tenderness begins to subside these children get on their feet, and then the influence of the superincumbent weight of the body comes into play. He was glad that the author had emphasized Dr. Berg's comments on this subject.

Dr. Judson referred to the peculiar locomotion of these patients. Such a child would sit on the floor with his feet before him, and by raising first on one and then on the other ischiatic tuberosity, and by the help of his hands placed on the floor, would move about with considerable rapidity, but in a remarkably grotesque manner. The activity shown in this way would indicate that tenderness of the bones is not an important, and certainly not a constant, feature. It is probable that such a child postpones walking because he is disinclined to trust his corporal weight on the softened long bones of the lower extremities; it is another instance of the necessity of

taking the weight of the body into account in the observation and treatment of orthopedic patients. He agreed with Dr. Ketch in condemning all attempts to coax or compel such a child to walk before he is ready to do so of his own accord.

Dr. Joseph Collins said that, as a neurologist, he had been much interested in the topic for discussion, and he would like to ask for further information in regard to the etiology and pathology. He would also like to know why the last case reported in the paper might not be considered a mild form of multiple neuritis, and also why we could not call most of these cases instances of auto-toxæmia, manifesting itself through the sensory and motor nerves. The clinical history, under such circumstances, would be such as had just been given, and the treatment exactly that ordinarily prescribed by the neurologist.

These are the cases which the neurologist would term "the pareses of toxæmia." Admitting the toxæmia the treatment should be by elimination, by checking the formation of leucomaines or ferments, and by keeping the child entirely at rest.

Dr. W. L. Carr said that at the time Dr. Berg's paper was presented to the section, in 1889, he was preparing an article for the American Pediatric Society, on "Some Manifestations of Rachitis Not Associated with Severe Bone Changes." From a considerable experience among children, he could say that rachitic muscular weakness is almost always without severe bone changes. Recently, attention has been directed to the association of scurvy with rachitis, and in this country Dr. Northrup has reported a number of such cases. In the case described by the author, and which he saw in consultation, the excessive epiphyseal tenderness and general hyperæsthesia, would seem to indicate the association of scurvy with the rachitic condition described. Both rachitis and scurvy are conditions of mal-nutrition, the latter being a more aggravated form. Both are amenable to very much the same treatment, viz., regulation of the diet, and the administration of phosphates and cod liver oil. When the tenderness is excessive, and accompanied by swelling around the joints, he was cautious about making a diagnosis until he had inquired sufficiently into the history to enable him to positively exclude scurvy. Where the scorbutic tendency was present, the use of fruit juices and of fresh beef is indicated, in addition to the treatment already mentioned. The dietetic management of rachitic cases in children is often quite difficult, owing to the existence of an intestinal catarrh, which prevents the ready absorption of cod liver oil; hence, an excellent preparatory treatment is to administer an alkali, and sometimes a cathartic. These children

have often been fed largely on starches and sugars, and dislike milk, and under these circumstances the change to a proper milk diet should be made very gradually, otherwise an attack of acute indigestion will be the result. It is quite possible that a poisoning of the system may be present, on account of the fat and sugar upon which most of these children have been fed, this kind of food making fat, rather than blood, but the disease itself shows no evidence of a condition of self-poisoning.

Dr. Halstead Myers described a case of marked rachitis, occurring in his service at St. Luke's Hospital, in which the kyphosis was so rigid that Pott's disease could not be excluded until after three weeks of observation; the pseudo-paraplegia had lasted two years, a longer duration than he had ever seen before. The power was gradually improving, though the child was still unable to stand; pseudo-hypertrophic paralysis and poliomyelitis had been excluded.

Dr. Royal Whitman asked as to the intellectual capacity of the child. Cases of delayed cerebral development, or semi-idiotic children, were often brought for examination because they were unable to stand. These patients often suffered from rachitis, and it was occasionally difficult to differentiate between the want of power, or disinclination to stand, the effect of disease, and that resulting from impairment of the cerebral centres.

Dr. Myers replied that in his case the child possessed average intelligence.

Dr. R. H. Sayre said the symptoms of rachitic paralysis were often mistaken for Pott's disease, and he had frequently noticed more resistant curves of the spine than Dr. Shaffer's remarks would lead us to believe occurred, so that, in a number of these cases, rest in the horizontal position for a long time was requisite before the curve in the spine disappeared. While the diagnosis rests upon the history of the case and its general course, there was a rachitic state present long before the development of these bone deformities. The pain and tenderness are a benefit, in so far as they prevent the child from walking too soon, and, therefore, save it from greater deformity.

Dr. H. W. Berg said that the important thing to remember about the pseudo-paralysis of rachitis was that it was really not a paralysis; this is the first step in the successful treatment of these cases. Regarding the differential diagnosis between rachitis and multiple neuritis, he said that the one is an organic disease, resulting in organic muscular changes, while the other is a functional disease. The organic

changes resulting from a multiple neuritis would very soon give rise to unmistakable symptoms, while the pseudo-paralysis of rachitis never resulted in any change, either in the muscles or in the nerves.

Dr. Ketch, in closing the discussion, said that his object in writing the paper was to emphasize the clinical features already given in the paper by Dr. Berg, and to bring the differential points especially to the attention of the general practitioner. He had no new facts to present, except the question of the presence or absence of deformity in these cases, and the discussion had shown a remarkable unanimity of opinion regarding the absence of deformity. Personally, he thought he had seen quite a number of cases where muscular weakness and deformity were both present, and also that he had seen many cases where this trouble still persisted at the age of three or four years, and was associated with some deformity. It was not at all unlikely that some of these were instances of what is called "foetal rachitis." In his paper, read before the American Orthopedic Association, on "Posterior Rachitic Curvature," he had stated positively that there was no reason why rachitis and caries of the spine should not coexist, and he was sure that he had seen such a condition. This might explain the case reported by Dr. Myers. It must not be forgotten that in many of these cases of rachitic paralysis, the children have walked for some time before the muscular weakness develops, and that in these cases when this condition is first noticed the mother describes it by saying that the child "has suddenly been taken off its legs."

A MODIFICATION OF THOMAS' WRENCH.

Dr. Myers showed a modification of Thomas' wrench, much more simple, and costing about one-fourth as much as the original. The Thomas wrench could overcome an equinus, the rotation on the antero-posterior axis, and the adduction of the foot, as a whole, but it did not seem well designed to correct the adduction of the forefoot in relation to the heel, and to do this, Dr. Myers had attached to the distal jaw of the wrench another handle bar, so that he had two levers of the second class, having a common fulcrum. This fulcrum was placed over or just behind the cuboid, and the two other jaws clamped side by side on the inside of the foot. When the handles were separated the jaws also separated, so that the tissues on the inside of the foot were stretched. The outer border of the foot was not crushed inward between two fixed points of resistance, which would be very undesirable.

THE WORLD'S CONGRESS AUXILIARY OF THE WORLD'S
COLUMBIAN EXPOSITION OF 1893.

DEPARTMENT OF MEDICINE—DIVISION OF MEDICO-CLIMATOLOGY.

President, Charles C. Bonney; vice president, Thomas B. Bryan; treasurer, Lyman J. Gage; secretary, Benjamin Butterworth.

Subject: The Climates of the World, Their Effects Upon Health and Disease—Climatology from a Medical Stand-point.

PRELIMINARY ADDRESS OF THE COMMITTEE OF THE WORLD'S
CONGRESS AUXILIARY ON A MEDICO-CLIMATOLOGICAL CON-
GRESS.

The year 1893 will be made memorable by the exposition that the world will hold in Chicago. There will be gathered not only the exponents of the industrial wealth of the world in all the forms of material progress, but the advances made in art, science and civilization will also be set forth.

A series of congresses representing all of the departments of thought and scientific investigation is a true, even an indispensable, part of a world's exposition.

In accordance with this idea the World's Congress Auxiliary has been organized in connection with the World's Columbian Exposition, and has been recognized and approved by the government of the United States. Among the assemblages to be convened, what more fitting than that the department of medicine, the great healing art, with its many divisions, should be conspicuously presented? What more opportune time could have been selected by the climatologists of the whole world to meet and compare their observations and views on the different climates of the earth, and their effects upon humanity, and the diseases to which flesh is heir?

With that object in view a local committee of arrangements has been appointed by the World's Congress Auxiliary, and an advisory council will be selected from those eminent in this department in different parts of the world to arrange a world's congress of medical climatology, to be held at Chicago during the exposition season of 1893.

The design is to hold this congress at a time convenient to those who will attend the congresses of the other divisions of the department of medicine which are assigned to open May 29, 1893. This early date was chosen to accommodate those who will desire to attend the Medical Congress, to be held in Rome in November of next year.

The movement is as yet in a formative stage, and much

thought must be given to it before a detailed programme can be formulated.

The following topics have been suggested, and others will doubtless be added before the final programme is announced: The Leading Characteristics of the Climates of the Various States, Countries and Sections of the World.

Diseases Produced by the Climatic Peculiarities and Weather Changes in the Various Countries.

Relation of Climate to Consumption. Climates in which Consumptives Recover or are Materially Benefited.

Health Resorts: Special Feature.

Relation of Climatic Changes to Epidemics.

Changes of Climate due to Cultivation. The Effects of the Destruction of Forests, and Other Changes Incident to Civilized Life.

The Relations of Diet and Climate.

What May be Done to Improve or Modify Climates for the Promotion of Health and Comfort?

Geography of Carcinomatous and Sarcomatous Diseases.

Geography of Bright's Diseases.

Climatic Factors which Produce Epidemic Influenza.

Relation of Climate to Rheumatism.

Relation of Climate to Catarrhal Diseases.

Relation of Climate to Longevity.

Waters and Climate.

Climatic Effects upon the Eye.

Relations of Climate to Diseases of the Ear.

The Effects of Sun Spots upon Climatic Conditions.

What More Can the Weather Bureaus do to aid Climatologists and Disseminate Climatological Knowledge?

Comparison of Climatic Differences as manifested by Similar Diseases in the North and South Temperate Zones.

Climatic Relations to Remittent and Periodical Fevers, and to Continued Fevers.

Climatic Relations to Malaria.

Acclimation. Disorders Produced by Migration.

It is the purpose of the Committee, with the advice of the Council, to arrange for a report from each State and Country of its climatic peculiarities. The Health Resorts of each State and Section will also be properly represented.

This Congress will afford a most favorable opportunity to compare the Climates of the various States, Countries, Islands and Continents of the whole world, from a medical standpoint, by delegated representatives of the various localities.

The Changes that occur in Climates, and which possibly attend the great epidemics, merit world-wide attention.

If the effects of climates upon the one disease, consumption, can by such comparison be fairly ascertained and approximately settled, great good will result to afflicted humanity.

The bearing of Climate upon such Diseases as Rheumatism, Catarrh, Cancer, Bright's Disease, and generally upon Health and Longevity, will form especially interesting questions for consideration in the Congress.

The Committee would be pleased to have suggestions as to topics and modes of proceeding, as well as those who may take part in the discussions. Proposals for Membership of the Advisory Council are also invited.

All communications should be addressed to the Chairman of the Committee.

T. C. DUNCAN, M. D., *Chairman*,
 I. N. DANFORTH, M. D., *Vice Chairman*,
 L. B. HAYMAN, M. D., *Secretary*,
 J. D. HARTLEY, M. D.,
 A. K. CRAWFORD, M. D.,
 F. D. MARSHALL, M. D.,
 J. B. S. KING, M. D.,
 J. A. ROBINSON, M. D.,
 S. A. McWILLIAMS, M. D.,
 A. L. CLARK, M. D.,

Committee of the World's Congress Auxiliary on Medico-Climatology.

World's Congress Headquarters, Chicago, August, 1892.

AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.

At a recent meeting of the American Electro-Therapeutic Association held in the city of New York, October 4, 5, and 6, the following officers were elected for the ensuing year:

President, Dr. Augustin H. Goelet, of New York; vice presidents, Dr. William F. Hutchinson, of Providence, R. I.; Dr. W. J. Herdman, of Ann Arbor, Mich.; secretary, Dr. M. A. Cleaves, of New York; treasurer, Dr. R. J. Nunn, of Savannah, Ga. Executive Council: Dr. W. J. Norton, of New York; Dr. G. Dillon Massey, of Philadelphia; Dr. Robert Newman, of New York; Dr. Charles R. Dickson, of Toronto, Canada; Dr. J. H. Kellogg, of Battle Creek, Mich.

The next meeting will be held September 12, 13, and 14, 1893.

ELEVENTH INTERNATIONAL CONGRESS.

As a recent notice in this journal has informed our readers, the Eleventh International Congress will meet in Rome,

Italy, from September 24 to October 1, 1893. By an official letter dated August 22, 1892, and signed by Prof. Guido Baccelli, president, and Prof. E. Maragliano, secretary general, Dr. A. Jacobi, of New York, has been directed to form an American sub-committee. Its membership is not yet complete, but on it are already found besides that of the chairman, the names of Drs. Wm. Osler, of Baltimore; S. C. Busey, of Washington; N. S. Davis, of Chicago; Charles A. L. Reed, of Cincinnati; Wm. Pepper, of Philadelphia; F. Peyre Porcher, of Charleston; James Stewart, of Montreal, and Alexander J. C. Skene, of Brooklyn, N. Y. In the interest of facilitating the trip to Italy and reducing the expense, arrangements will be made with the steamship companies. According to a communication from the central committee, contained in a letter of the secretary general's dated September 14, the North German Lloyd proposes to reduce the fare to Genoa 20 per cent., and that of the return trip by 10 per cent. It is expected that still more favorable terms will be secured.

At the recent meeting of the American Orthopedic Association held in the city of New York, September 20, 21, and 22, 1892, the following officers were elected to serve for the ensuing year: President, Dr. A. J. Steele, St. Louis; vice-presidents, Dr. Samuel Ketch, New York, and Dr. Arthur J. Gillette, St. Paul; treasurer, Dr. A. B. Judson, New York; secretary, Dr. John Ridlon, 34 Washington street, Chicago. The next annual meeting will be held in St. Louis, the third week in September, 1893.

PRIZE ESSAYS ON THE ACTION OF ALCOHOL AND ITS VALUE IN DISEASE.

The American Medical Temperance Association, through the kindness of J. H. Kellogg, M. D., of Battle Creek, Mich., offers the following prizes:

1. One hundred dollars for the best essay "On the physical action of alcohol, based on original research and experiment."
2. One hundred dollars for the best essay "On the non-alcoholic treatment of disease."

These essays must be sent to the secretary of the committee, Dr. Crothers, Hartford, Conn., on or before May 1, 1893. They should be in typewriting, with the author's name

in a sealed envelope, with motto to distinguish it. The report of the committee will be announced at the annual meeting at Milwaukee, Wis., in June, 1893, and the successful essays read.

These essays will be the property of the association and will be published at the discretion of the committee. All essays are to be scientific, and without restrictions as to length, and limited to physicians of this country.

Address all inquiries to

T. D. CROTHERS, M. D.,

Secretary of Committee.

Hartford, Conn.

Correspondence.

PHILADELPHIA, October 26, 1892.

Editor Medical and Surgical Journal: Having been asked to undertake a research at the expense of the government of his Highness the Nizam of Hyderabad, India, with the object of reconciling the conflicting views concerning the action of chloroform, I am anxious to receive from American physicians and surgeons records of cases where it was noticed that the beating of the heart stopped *before* respiration, or respiration stopped *before* the heart.

Notes concerning any such cases will be considered strictly confidential, provided the reporter states his desire that his name shall not be mentioned in the report when it is finished. Otherwise due credit will be given for any information received.

Very truly yours, H. A. HARE,

Professor of Therapeutics, Jefferson Medical College, Philadelphia.

N. O. Medical and Surgical Journal,

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Articles from physicians are respectfully solicited. All articles, news and exchanges, and books for review, should be sent to the EDITOR, NEW ORLEANS MEDICAL AND SURGICAL JOURNAL. Business communications should be addressed to the BUSINESS MANAGER, NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

EDITED AND PUBLISHED BY

AUGUSTUS McSHANE, M. D

COLLABORATORS:

DR. F. W. PARHAM.

DR. H. W. BLANC.

DR. A. W. De ROALDES.

DR. R. MATAS.

DR. JOHN DELL'ORTO.

Editorial Articles.

NATIONAL CONTROL OF QUARANTINE DEFENCES.

The nation is to be congratulated on its happy deliverance from the monster that has caused so much devastation in northern Europe—cholera. When, in the early part of September, a few cases of cholera were found in New York City, an uncomfortable feeling came over the people, but, fortunately, nothing like a panic developed—a fact all the more gratifying because it was the expression of the confidence of the people in their own intelligence and the vigilance of their health officers, and did not arise from apathy or indifference.

There were, however, two very disquieting features about the cholera in New York. First, the disease had existed for several days before the Board of Health officially proclaimed the fact. In years gone by, it was fashionable to denounce the Louisiana Board of Health for systematically concealing, every summer, cases of yellow fever that never developed here. The open, manly course of our successive State boards has completely dispelled the suspicion in which it was formerly held. The concealment policy into which the New York

Board unfortunately lapsed can not be too strongly condemned. It is gross injustice to the rest of the country.

The second point to which attention should be called is this, that the State forces can not adequately control all the avenues of entrance to the city of New York. When an infected ship arrived at the quarantine station the health officer labored zealously to prevent the introduction of the disease into New York. Great zeal, however, can not compensate altogether for antiquated disinfecting appliances and lack of forethought on the part of the Board of Health and any others who are supposed to display some generalship in sanitary matters. An article in the *North American Review*, by Dr. Jenkins, the health officer of New York, shows very clearly that a large amount of work, and, incidentally, a large amount of unnecessary worry, was done in the battle against cholera. Dr. Jenkins' article displays, first and foremost, his own zeal; then the zeal of his lieutenants; and, lastly, the poor way they have of doing things there. "Trust in God, but keep your powder dry" was the injunction of a man whose reliance on Providence did not operate to the detriment of his judgment. In sanitary matters zeal is a good thing to have, but it is not the only thing required; modern sanitary appliances play no inconsiderable part in the problem of excluding infectious diseases.

In spite of the good, hard work done by the health officials, and in spite of the ordinary resources of the board and the voluntary aid given by Governor Flower and some other prominent New York men, the cholera got into New York. Too much credit can not be given to the health authorities for the vigorous measures they adopted to prevent New York from becoming a distributing pest-spot; they succeeded in stamping out the disease in that city. The fact remains, however, that the disease gained an entrance into the city. Again, there are some seaports that are not as well protected as New York, and there is danger of introduction of the disease by way of Canada; and neither the New York board nor any other State board can successfully guard all of our frontier.

The question of excluding epidemic diseases is one that is as much a federal question as the tariff or the postal service;

and since public health is public wealth, it follows that the federal government should take prompt cognizance of a matter that deeply concerns the whole nation.

In quarantining vessels, or, better still, in enforcing rational maritime sanitation, uniformity of method and concert of action are desirable, nay, essential. The treatment accorded to vessels differs at different ports; there is no uniformity in quarantine methods, and the measure of protection against disease is a variable but unknown quantity. One of the most important steps that the national government could take to protect the public health would be to provide means of defence at all of our seaports, and along the borders, against the importation of communicable diseases, said means to be the same in principle at all the stations, and of one quality, that is, the best attainable.

The feeling of federal responsibility in the matter of excluding epidemic diseases is not new. It goes back a number of years, and was strong enough to crystallize into definite shape, and the National Board of Health was called into existence. The whole question of excluding epidemic disease has been ably traversed by Dr. Jos. Holt in an address delivered before the Tri-State Medical Society of Georgia, Alabama and Tennessee, October 26, 1892. He points out the inadequacy of State quarantines as now equipped, and quotes from a report of the International Quarantine Inspection Commission, which inspected all the quarantine establishments of the St. Lawrence and Atlantic coast. The commission says: "We have carefully examined every station on the coast as far down as the Delaware Breakwater, and find that much the same conditions exist everywhere. Not a single station is supplied with appliances for cleaning and disinfecting ships. Only a few have facilities for disinfecting baggage, while nearly all have poor hospital accommodations." The commission, however, finds room for praise of the New Orleans quarantine establishment.

The expense of maintaining our quarantine establishment is borne entirely by the State of Louisiana; yet it affords protection to the whole of the Mississippi valley. This is not as it should be; the nation at large should bear the expense. The

only way to secure a uniform and reliable system of national quarantine defence lies in the establishment of a national service, having its headquarters at the national capital, and operating impartially. A body that will issue orders that operate to the detriment of one seaport to discriminate in favor of another is not the sort of institution acceptable to Americans. If the powers of such a body be confined to battling against the introduction of epidemics from without, the individual State boards will still have a large field for the legitimate exercise of their functions within the boundaries of their respective States.

The recent cholera scare has served one good purpose: it has called public attention to the inefficient methods of most of our quarantine establishments, and has also strengthened the demand for a national health bureau. The present is just as good a time as any to form such a bureau, for all phases of the questions of quarantine and maritime sanitation have been worked out in Louisiana. We have shown the world what ought to be done at all of our seaports, but it is difficult to see how our methods can be adopted at every port without federal aid and supervision. No one, we venture to say, can deny the responsibility of the national government in the premises; and with responsibility, authority also exists. The two go hand in hand; and it will mark an era in the sanitary history of our country when Congress shall fully recognize its responsibility and take intelligent steps to discharge its duty.

THE INDEX-CATALOGUE OF THE LIBRARY OF THE SURGEON GENERAL'S OFFICE.

The thirteenth volume of this stupendous work has recently been issued. The titles extend from "sialagogues" to "sutugin," and embrace 9751 author titles, representing 4213 volumes and 6806 pamphlets. The subject titles contain 13,498 titles of books and pamphlets, and 29,896 titles of articles in periodicals.

This work is an invaluable aid to investigators who desire to inform themselves upon any subjects in which they may be interested. Dr. Billings, the surgeon in charge of this herculean undertaking, deserves great praise for the manner in which he directs the labors of his corps of assistants.

The index-catalogue is a unique publication. In no other country can we find such massive monuments of compilation and indexing, embracing every topic connected with the healing art. It is a thing of which Americans can feel proud. The liberality displayed in the government's contribution to medical literature is not wasted; it has placed at every worker's disposal a list of the men who have labored before him in the same field, thus enabling him quickly to grasp all that his predecessors have done.

RESIDENT SURGEONS OF EYE, EAR, NOSE AND THROAT HOSPITAL.

On the first Wednesday in December, 1892, the executive committee of the Eye, Ear, Nose and Throat Hospital will elect four resident surgeons to serve for one year, beginning January 1, 1893. The varied character and vast amount of the clinical material of this hospital render it a very valuable field for the acquisition of practical knowledge in the specialties. Persons desiring full information can obtain the same from Mr. Jos. A. Hincks, secretary, No. 29 North Rampart St., New Orleans, La.

Drs. Moure (of Bordeaux) and Charazac (of Toulouse) reported favorably on the candidacy of Dr. A. W. de Roaldes (of New Orleans), who was unanimously elected foreign corresponding member of the French Society of Otology, Laryngology and Rhinology, meeting of May 2, 1892.

The Harvard Medical School Association has issued an interesting and valuable list of its members, which it will be glad to send to graduates of the Medical Department of Harvard University, in whatever part of the world they may be. The association was formed about one year ago, and *all* graduates of the school are eligible to membership. The object is to unite all alumni and to advance the interests of the school and of medicine. The entrance fee and the annual assessment are merely nominal.

Abstracts, Extracts and Annotations.

MEDICINE,

EARTHWORMS AND TUBERCULOSIS.

Lortet and Despeignes recently reported to the Academy of Science, Paris, some very interesting studies in relation to the function of earthworms in the dissemination of tuberculosis. These authors had previously shown that earthworms may preserve in different parts of their bodies the bacilli of tuberculosis during many months, and that they may thus bring them to the surface of the soil. Recently these scientists have extended their researches in this direction, and have determined the important fact that earthworms that have become infected with tubercle bacilli leave behind them in their fecal matters, as they move through the earth, tubercle bacilli possessed of virulent properties.

Pasteur called attention to a similar action of earthworms in relation to the bacteria of charbon many years ago.

It is of interest to know that the bacilli of tuberculosis sustain the same relation to earthworms as that of charbon. With these facts determined, it is easy to appreciate how a locality may become infected with the germs of tuberculosis. Earthworms harboring the microbes in their bodies scatter them about through the soil, and bringing them to the surface, where the excreta containing them may be dried and pulverized into fine dust and lifted into the air in the shape of minute particles which may be readily inhaled, it is easy to see how a locality once inoculated with tuberculosis becomes permanently infected.

The purpose of this arrangement of nature in the seeming co-operation of organisms of a low type against human life is indeed difficult to comprehend. The fact, however, is one of importance, and should lead to the absolute destruction of the sputum in every case of tuberculosis. There ought to be a law in every civilized community requiring every person suffering from tuberculosis to destroy his sputa, as it is chiefly through this means that the disease is extended.

Nearly a century ago, the prevalence of tuberculosis in Naples led to the establishment of a quarantine against the disease, similar to that which is maintained against leprosy in countries where this latter disease prevails. Known facts

about the two diseases indicate that pulmonary tuberculosis is a more infectious malady than leprosy. Its ravages are more rapidly fatal in their effects, and recovery from the disease, when it has once obtained a foothold in the system, is almost as rare. A malady which destroys from one-fifth to one-seventh of all that die is a veritable plague of the most stupendous proportions; so that how to restrict or restrain this disease is one of the gravest problems with which the sanitarians of the present day are called upon to deal.—*Bact. World and Mod. Medicine.*

THE THERAPEUSIS OF STRONTIUM.

In these days of synthetic chemistry and of research for new remedies, it seems strange that strontium, a mineral capable of forming a great number of crystallizable salts, a substance known to every school boy for the marvelous beauty of its flame, should remain absolutely unknown in the domain of therapeutics. Its possible contamination with barium may have had some effect in producing this result—the bromide of barium being as far above the bromide of potassium in toxicity as the bromide of strontium is below it—but such a reason is insufficient to account for the total neglect of strontium by the medical profession. Constantin Paul, no doubt, reflected the general opinion in regard to strontium when he said: “I knew little about the substance except that it formed part of the composition of the Bengal light; I did, however, know that it was one of the ingredients of Carlsbad water.” This investigator has now used in his practice over six pounds of the lactate of strontium and in no instance has he noticed any intolerance for the drug. Many other observers have also employed strontium, both in hospital and private practice, since M. Laborde read his paper on the inoccuity of the salts of strontium before the *Societe de Biologie*.

This paper was read on the fourth of July, a day memorable to us by its exhibitions of strontium—but not in the medical sense. After this paper was read a great many of the best French physicians used the drug, and, singularly enough, they all laid stress on the fact that strontium was not poisonous—in fact it appeared to be an efficacious remedy without any dangers whatever. M. Féré made experiments on rabbits with most all the mineral bromides, the intravenous injections being pushed to the lethal extreme. All the animals died in convulsions. The toxicity of the strontium salt was far below that of potassium; lithium and sodium required higher doses than strontium to produce death, but the convulsions produced by

the latter were less marked. This observer has used the strontium bromide with good results in epilepsy, in doses of 80 to 90 grains a day.

M. Sée has employed the lactate of strontium in Bright's disease, in which it acts very favorably, principally through its influence on the digestive and assimilative organs. M. Dujardin-Beaumetz has also reported very favorably in regard to the value of strontium where there is disorder of the digestive functions.

M. Constantin Paul published (*Les Nouveaux Remèdes*) details of twelve cases of Bright's disease treated by the lactate of strontium. As this drug is not a diuretic it might be given advantageously with diuretin.

M. Paul concludes his paper as follows:

"Strontium is not toxic; it is not a diuretic; it diminishes the albumen well and rapidly in epithelial and parenchymatous nephritis, but it does not suppress it entirely; if the administration of the drug is stopped too soon the albumen increases at once. The diminution of the albuminuria is followed by a very notable amelioration of the other symptoms and the patient exhibits much improvement. The presence of fever, even intense, does not prevent the action of the lactate of strontium in parenchymatous nephritis.

"I have no personal experience in the use of the drug in maladies of the stomach, or of the bromide in epilepsy, but I administered the latter salt in a young woman the subject of hystero-epileptic attacks recurring at the menstrual period. These attacks had resisted the use of bromide of potassium in doses of sixty grains a day; the bromide of strontium, given for two months in doses of ninety grains a day, appears to have succeeded, as she has not had any attacks during that time."

STRONTIUM LACTATE IN TÆNIA.

Laborde (*Journal de Med. de Paris*) has had excellent results in tænia with the usual dietary care from the following:

℞ Strontii Lact	3i
Aquæ.....	3 viij
Glycerini.....	q. s.

M. S.—Two teaspoonfuls every morning for five days.

This is practically the same strength as the standard solutions of stront. lact., used so largely in albuminuria.—*Medical Standard*.

SURGERY.

LUPUS EXEDENS.

WITH HISTORY OF A CASE TREATED SUCCESSFULLY BY THE
CONCENTRATED RAYS OF THE SUN (SOLAR CAUTERY).

By O. V. THAYER, M. D., San Francisco, Cal.

Lupus is a chronic inflammation of the skin, appearing in the shape of external tubercles, of different sizes, single or in clusters, of a livid, red color and indolent character, followed either by ichorous ulcers, which become covered with brownish and usually very adherent scabs (*lupus exedens*), or by extensive changes in the structure of the skin, but without ulceration (*lupus non-exedens*).

This disease is generally confined to the face. It may attack at once or in succession several regions of the body. The varieties which have been indicated are very distinct in their external appearances and also require different modes of treatment.

Lupus exedens is generally developed on the alæ or tip of the nose. It makes its appearance as a small tubercle of a dusky red color, whose progress is usually tardy and sometimes as a chronic inflammation of the mucous membrane of the nasal fossæ. A thin scale or crust then forms at the opening of the nostrils. This is removed and a second and thicker one succeeds it—an ulcer in fact has been formed, and soon extends to the alæ of the nose.

Under other circumstances a livid, purple tint and some swelling at the end of the nose are the first symptoms of the disease observed. The redness increases, a superficial sore is formed which becomes covered with a scale and the ulcer extends in depth. It may be confined to only one of the alæ, which swells, becomes painful and of a purple hue, while the other remains free of the disease. A slight ulcer then forms and becomes covered with a little scale.

This the patient commonly picks off, when it is replaced by a thicker one, under which the ulcerative process continues to go on, the scale being found to increase in thickness every time it is removed. The skin and occasionally the cartilage are silently destroyed, and an ulcer of a bad character from which a fetid sero-purulent discharge is poured out is at length discovered as if by accident established under the scale. The ravages committed by the disease vary extremely. Almost the whole of the nose disappears in one instance while the

point only suffers a little in another, in which case it often looks as if a piece had been removed by a cutting instrument.

When such ulcers have been arrested and healed new tubercles occasionally form on or near the cicatrices, and the parts which had been spared originally may be entirely destroyed by a renewal of the ulcerative process, even the whole nose and septum may vanish before its destructive influence. Sometimes, if the disease is interfered with, it seems to acquire a new energy. Incrustations, which are attended with acute pains and grow very thick in the course of a few days, form in the interior of the nasal fossa, whence a puriform fluid distils, and the point of the nose is rapidly destroyed.

The disease every now and then seems to be advancing toward recovery, when the part that was almost cicatrized turns a livid, red color and is attacked anew with painful ulceration and is covered with a thick scale, under which the destructive inflammation makes rapid progress.

In *lupus exedens* of the skin of the nose the mucous membrane of the nasal fossa is almost always affected with chronic inflammation. In some rare cases the septum is even destroyed before the outer surface of the nose is implicated. The tubercles of *lupus exedens* are occasionally evolved near the commissure of the lips, ending in a partial destruction of the parts by the shrinking of cicatrices. When the disease gets well the opening of the mouth is apt to be considerably diminished. The lower eyelid is occasionally attacked, ending in great deformity, the lids receding from the eyeballs. The eyeball in this case being imperfectly protected takes on inflammatory action, the conjunctiva thickens, the cornea loses its transparency, and after a while becomes so dim that blindness follows. The cicatrices which follow the healing of lupous ulcerations often result in the forming of white bands, stretching from the parts where the mischief began to those in the vicinity. They are similar in appearance to the cicatrices that follow extreme burns.

Lupus exedens often continues for years under ordinary treatment, committing frightful ravages without the general health appearing to suffer to any great extent or degree.

Lupus non-exedens. This variety does not ulcerate; but, on the contrary, the skin undergoes great structural changes independent of ulceration. I do not deem it advisable, however, to discuss this variety of the disease in this paper, as it would occupy too much precious time.

Causes.—*Lupus* is fortunately a disease of rare occurrence. It seems more common in the country than in larger towns and cities, and attacks women more frequently than men.

Low, damp localities, wanting in sunlight, with poor, badly-cooked food, limited in quantity, predispose to this disease. Scrofulous children are, of all individuals, the most liable to its attacks, yet it undoubtedly occurs among the robust who have lived in the enjoyment of good health; rarely shows itself after the age of fifty years. The disease is not contagious, and is seldom seen in the better class of society.

Prognosis.—Under ordinary treatment lupus is always a very obstinate disease. Months and even years elapse before it yields to treatment. The earlier the period of its existence the more hope of success as to the treatment prescribed.

So long as the cicatrices remain soft, bluish, and convey to the fingers something like a feeling of fluctuation, and so long as they are surmounted with tubercles of different sizes, there are grounds to apprehend further trouble, renewed attacks of erosive inflammation, in which case the tubercles ulcerate and the cicatrices already formed are not long in becoming open ulcers again.

Treatment.—The very first indication in commencing the treatment of lupus is to endeavor to modify the general condition by appropriate treatment. The patient should at once be placed under the best hygienic influences, with proper food and regimen. The system of the patient should be newly built up as it were. The disease itself is to be combatted at the same time by such external and internal remedies as appear to exert a salutary influence on the development and progress of tubercles and the ulcerative processes. Local applications to the ulcerative surfaces, such as caustics and powerful astringents, have been generally relied upon. Nitrate of silver, pottassa fusa, butter of antimony, supernitrate of mercury, arsenical powders and pastes, scraping out the diseased tissue with curette or spoon, and last, but not least, “the solar cautery,” using the concentrated rays of the sun for this purpose.

When the disease is extensive the cauterization should be done with great caution. It should be confined to a single part at one time, and from time to time extended successively to the whole of the affected surfaces. When the ulcers are covered with scabs they must previously be gotten rid of by the use of poultices. During the treatment the patient should avoid exposure to heat or rigorous cold, and dampness. For want of attention to these precautions cicatrices that appeared sound have frequently been seen to open again afresh. When the disease is accompanied with any violent functional disturbance this must be remedied by appropriate treatment: preparations of iron, iron with bitter compounds, iodine preparations, sulphur baths, etc. The unmedicated baths of

hot water, used daily, have, under my directions, proved of great value in lupus. Food of good quality well cooked, a residence in a dry and bracing atmosphere, are powerful modifiers of constitutions; cheerful surroundings, proper moral influences and encouragement act as tonics to the depressed mind and render life more valuable to the individual.

I now come to what I consider the most important and instructive point in this paper, to-wit: The successful treatment of lupus with concentrated rays of the sun, which I have named "The Solar Cautery."

Some twenty-five years ago, while experimenting with a common lens (small sun-glass), I focused the rays of the sun upon a small mole upon my arm. Instantaneously it began to smoke, and within a few seconds it was destroyed. No pain or inflammation followed the operation; the burned surface healed readily, leaving no trace of its former self, not even a cicatrix. This simple experiment suggested the idea that the lens could be used with success in destroying morbid growths. I at once put this idea to practical tests. From that time to the present I have continued to make use of the solar cautery in a variety of surgical diseases and have rarely indeed experienced any disappointments. It has advantages over and above all caustics. Some of these are the following: It is, at all times, under the control of the operator. Its action stops the moment the lens is removed. No pain follows, as the concentrated sun rays act as an anæsthetic. It will destroy morbid tissue, while the adjoining normal tissue remains uninjured owing to its great vitality. Very slight inflammatory action follows its use. With these preliminaries I will give the history of a patient suffering from lupus successfully treated with the solar cautery.

Mrs. B., aged 40 years, consulted me in reference to a disease of the nose and upper lip which made its appearance some two years previous, commencing in the septum of the nose, resembling an ordinary "cold sore." This was in the month of June. In the following September the disease had extended into the nares, alæ, tip of the nose and upper lip. The skin of the nose seemed spongy, not unlike a pin-cushion. A pin or needle could be thrust into it without pain, a little blood following, with a slight oozing of a watery fluid afterward. In December she came to this city for medical advice and treatment. At this time the disease covered the right side of the nose, extending upward one-half the distance to the eye and down the lip near its margin. She continued under treatment from this time to the next April, receiving but little benefit, however. At times the disease seemed to be improv-

ing, but soon to be followed by an aggravation of all the symptoms. Hard lumps as large as a pea or bean formed under the skin, which softened and ulcerated, discharging pus, to be followed sooner or later by a thick crust.

From December to April many remedies were applied to the diseased parts, some of them producing the most intense pain, lasting for hours. She informed me that the greatest relief and benefit received was from the use of an ointment prescribed by an old lady, the composition of which she did not learn. At the time she came under my observation the disease was confined mostly to the upper lip directly under the nose, which was occupied with ulcers secreting pus. The anterior nares were red, the mucous membrane extremely vascular and thickened. The skin in the immediate neighborhood of the disease had a dark, bluish tint and roughened appearance.

This was the status of the disease after two years of unsuccessful treatment while under the care of some of the most skillful physicians of this city and vicinity. After a most thorough and critical examination of the diseased tissues, and learning from the patient (a very intelligent, common-sense lady) the history and treatment of her case during the last two years, I decided to apply the solar cautery to the diseased surfaces. My confidence in this remedy gave me great hope that the treatment would prove successful. With a powerful lens with a focal diameter of three lines, with a clear sky and unobstructed sunlight (essential in the success of the use of the solar cautery), I most thoroughly cauterized the diseased surfaces, destroying the morbid tissues. This was accomplished in the space of two minutes of time.

The cauterization was not very painful at the burning, all pain ceasing after the removal of the lens. I can not recall one single instance where severe pain continued for any length of time from the use of the cautery. Having treated by this method more than one thousand cases, I certainly would remember some of those complaining of severe pain after the operation. I dressed the burned surfaces with zinc ointment, over which was placed a layer of absorbent cotton, wet in a 5 per cent. solution of carbolic acid, followed by a thicker layer of dry cotton. The next day there was more or less swelling of the parts, some redness of the adjoining skin, with more or less tenderness.

Thirty-six hours after the operation an improved condition was visible. The same dressing was continued, being changed daily. The improvement went rapidly forward, the discolora-

tion of the lip and nose disappearing from day to day. Two weeks after the operation this lady presented herself at my office with the ulcerated surfaces most thoroughly healed, with a slight but smooth cicatrix. The discoloration of the skin in the immediate neighborhood had disappeared and the diseased surfaces assumed quite a natural appearance.

This patient left me, as you will naturally anticipate, a very grateful and happy woman.—*Pacific Medical Journal*.

“CÆLIOTOMY,” VERSUS “LAPAROTOMY,” AS A SURGICAL TERM.¹

By ROBERT P. HARRIS, A. M., M. D., Philadelphia.

When you perform an abdominal section, and report the case, under what scientific term do you describe the operation? You probably call it a “Laparotomy,” because hundreds of operators are in the habit of using the same word, or its synonym, in a dozen countries and languages.

Where did this term originate? You say it has a Greek derivation (the language of Greece having been the tongue of the first anatomists) and comes from two words, *lapara* and *tomæ*, to cut. Now, what did the Greeks call the *lapara*? It was certainly never the abdomen.

Did you ever look carefully into an ancient Greek anatomy to find out what the abdomen was really called in their language? The word *belly* appears ten times in the English version of the New Testament; did you ever note that the original Greek has the work *koilia*, and never *lapara*, in these ten places?

Rufus, of Ephesus, a distinguished physician and writer, born A. D. 112, wrote a paper entitled “Names of the Parts of the Human Body,” in which he has this significant sentence: “The *emphalos* (navel) is the hollow which occupies the middle of the *koilia*, where we cut the veins that nourish the fœtus; the middle part of the hollow is the *akromphalon*” (top of the navel).

“Lapara” is a very old Greek term, and was applied in the time of Hippocrates to the parts between the short ribs and the iliac bone (the flank), and scores of lexicographers have thus defined it. The operation for lumbar hernia, or laparocèle, was a true laparotomy; and so, also, is that of a lumbar, or laparocolotomy. The term *lapara* originally meant a hollow, and was for this reason applied by the early anatomists to the *hollow of the waist*. It was never used to designate a convexity.

The misapplication of the term “laparotomy” commenced

in the year 1811 in the medical thesis of a Wittenberg student of the name of Fiedler, who wrote in Latin under the title "De Laparotomia."

He had witnessed a true laparotomy performed, on October 17, 1810, upon a man of 50 with a diseased colon, as he lay on his right side. Fiedler wrote again in 1817, and took it upon himself to coin such distortions as "laparo-gastrotomia," "laparo-raphia," and "laparo-hysterotomia"—his desire seeming to be to supplant the term "gaster," which really meant the belly, by the word "lapara," which a careful investigation would have taught him was not its Greek synonym. The mystery is how an error of this kind ever made the progress that it has in leading the medical world astray.

"Koilia" being the Greek word for abdomen, the natural synonym of gastrotomy in its old meaning is "cœliotomy," pronounced soft (se-le-otomy). This is not a new coinage except as to its terminal, for we have long had cœlio-paracentesis for tapping the abdomen. The term cœliotomy has been adopted by Prof. Sängcr, of Leipzig; by Dr. J. Greig Smith, in his *Abdominal Surgery*; by Profs. Keene and White, in their *Text Book of Surgery*; and by a number of well known medical writers. This adoption gives us the compound terms cœlio-hysterotomy (Cæsarean section), cœlio-hysterectomy (excision of uterus through the abdomen), puerperal cœlio-hysterectomy (Porro-Cæsarean operation), cœlio-nephrectomy (abdominal excision of the kidney), etc.

What characterizes the present position of our condemned term is its wonderful tenacity of hold in the nomenclature of gynecological writers who have admitted the error of its application in abdominal surgery. Two years ago I published a classical pamphlet on the subject and sent it to prominent writers in thirty different countries. I also sent a copy to every Fellow of one of our leading national medical societies just before it met in annual session in 1890, and their letters attested its effect upon their sense of reason. It convinced them that *lapara* was not the abdomen and that *koilia* was; but it did not break up the habit of use, as shown by the fact that four papers entitled "laparotomy" appeared in their *Transactions* for 1891, and the term was time and again made use of throughout the volume, but no one said "cœliotomy" as much as once. The old rut is so easy to run in, and the laparotomy wheel will get in. It took eighty years to propagate the error, and it will take time to correct it.

GYNECOLOGY.

PELVIC DISEASE AND PSYCHICAL DISTURBANCES.

At the fifth annual meeting of the American Association of Obstetricians and Gynecologists held at St. Louis Mo., September 20-23, 1891, Dr. George H. Rohé, of Catonsville, Md., read a paper upon "The relations of pelvic disease to psychical disturbances in woman."

The author pointed out the frequency with which bodily conditions influenced mental states. Thus a torpid condition of the intestines, Bright's disease, putrefactive processes in the intestinal canal, etc., might give rise to melancholia and other disorders of the mental functions. It is not irrational to suppose likewise that diseases of the female sexual apparatus would have a not inconsiderable influence in the production or perpetuation of mental disorders. As a contribution to the knowledge of the subject the following report was submitted:

In a hospital containing 200 insane women, 35 were subjected to vaginal examination, and 26 found with evidences of pelvic diseases. In 18 of these the uterine appendages were removed, with the following results:

Sixteen recovered from the operation and two died. Of the sixteen recovered three have been discharged from the hospital completely restored, both physically and mentally. In ten considerable improvement followed the operation in both physical and mental conditions, and in three the operation was of too recent a date to allow any definite expression of opinion.

The mental disorder present in the eighteen cases was, melancholia in six cases, simple mania in one, puerperal mania in four, hysterical mania in one, periodic mania in two, hysterio-epilepsy with mania in one, and epilepsy with mania in three.

The author, basing his opinion upon his experience, concludes as follows:

"The facts recorded demonstrate, first, that there is a fruitful field for gynecological work among insane women; second, that this work is as practicable and can be pursued with as much success in an insane hospital as elsewhere, and, third, that the results obtained not only encourage us to continue in the work, but require us, in the name of science and humanity, to give to an insane woman the same chance of relief from disease of the ovaries and uterus that a sane woman has."

TWENTY-FIVE CASES OF EXTIRPATION OF THE UTERUS FOR
CANCER. A CONSIDERATION OF ULTIMATE RESULTS.

Dr. Charles A. L. Reed, of Cincinnati, presented to the recent meeting of the American Association of Obstetricians and Gynecologists a report of twenty-five cases of complete vaginal extirpation of the womb for cancer, with only two primary deaths—one from shock and one from iodoform poisoning. Of the twenty-five operated upon but fourteen were of more than two years' standing, and hence were all that could be discussed with reference to their ultimate results. These fourteen were divisible into two classes of seven each, viz.: those in which the disease had existed for more than six months before the operation and those in which it had existed for less than six months before the operation. Of the first class—*i. e.*, those of more than six months' (an average of ten months) previous duration, all were dead; of the second class—*i. e.*, those of less than six months' (an average of four months) previous duration, only one has since died. One of the recoveries is of more than five years' duration. The conclusion from these figures is that cases of cancer of the uterus ought to be remanded for operation as soon as diagnosed. Dr. Reed looks upon total extirpation as the only operation to be advised or practised in these cases, the primary mortality from which, in experienced hands, varies from 5 to 8 per cent.

Book Reviews and Notices.

A Hand-Book for Opticians. A treatise on the optical trade and its mechanical manipulations. By W. Bohne, Optician. Second edition, thoroughly revised and greatly enlarged, with illustration. Published by the author, with A. B. Griswold & Co., No. 119 Canal street, New Orleans, La. 1892.

That this is a day of book making is a sadly true and trite complaint. That the multitude of books by which we are overwhelmed are crude and sadly lacking in originality of matter or manner is as true as trite and as loudly proclaimed and bewailed. How strange it is that when from time to time a

book of some originality drops from the overloaded presses, its advent is so feebly and tardily hailed. How true that, especially if the man be a Southerner, his neighbors are the last to find his work and him. "He has quite a reputation; even in the North," seems to be the accolade of Southern talent, and to be "well known in New York" the highest decoration attainable to Southern genius.

Hear, then, the conclusion of the whole matter: There is no new thing under the sun, and to the end of the chapter a prophet shall not be without honour save in his own house and his own country.

A year or so ago a fellow townsman of ours published a little book, hardly more than a series of notes, embodying the results of over forty years of experience and observation in his art and trade—that of a practical optician. Its like was not to be found in the English language; something resembling it, perhaps, in the French tongue alone. A moderate demand soon served to exhaust the small edition, and this spring the author supplemented it with, not a mere second edition, but a new book, every chapter of which has been carefully rewritten, corrected, amplified and simplified, while a vast amount of new matter of great importance and usefulness has been added. In its present form the little work is a monument to that zeal, enthusiasm and love of observation and research which are so characteristic of the German race. Nothing can give a better idea of the object of the book and of the author toward a subject which has absorbed the labour and devotion of a lifetime than the following excerpts from the table of contents and the preface of the first edition:

"My object," says Mr. Bohne, "is to instruct the rising generation of our trade, and elevate them to the great progress optical science has made within the last quarter of the century. I am well aware that the present work is not as complete as it ought to be because every chapter is composed and written as *something new*. There is nothing previously published about these subjects, and my book may be the pioneer to open the road for other writers. * * * * * What

I offer here is the result of a life-long experience and of numerous investigations. Workmen who find any error, or who know better methods, are cordially invited to communicate their information to the author, who will acknowledge his obligation in a future edition. * * * * *

My book will furnish to any young man a solid foundation of what he ought to know, and will enable him to master all difficulties he may encounter in the pursuit of his occupation. As there is no telling what demand will be laid on his ability in the imme-

diate future, he should try to understand thoroughly the fundamental laws of his trade and become a competent workman."

These promises the author has strictly carried out. It is not our function to enter into an elaborate and extensive review of the book, but we may add to what we have said, that the style, in spite of faults, is as interesting as the matter. The author *talks* to his reader in an unconventional, naive, frank and engaging way that is very charming in its quaint simplicity and foreign tone. The contents of the book are: Inch and metric systems; different qualities of lenses; merits and defects of pebbles; prisms, spherical and cylindrical lenses; optical line and centre; setting of spherical lenses; measuring and setting of compound lenses; selection of spectacles; double focus and split glasses; colored or tinted glasses; redressing of spectacle frames; use of test types; refraction and dispersion of light; acromatic lenses; anatomy of the human eye; presbyopia, myopia and hypermetropia; astigmatism; ophthalmoscope; second sight; relief of injured eyes; artificial human eye; caloric rays in different lights; range of vision; tears: facial expression; history of the invention of spectacles and gradual development of the optical trade; prominent opticians, scientists and inventors; miscellanies; glossary.

Finally, it must not be supposed from the chapters on the ophthalmoscope, anatomy of the human eye, etc., that it is any part of Mr. Bohne's plan to educate every optician into an oculist. Nothing could be further from his expressed purpose. On the contrary, his views are very conservative and absolutely free from quackery.

The chapters on the history of the invention of spectacles, on pebbles, caloric rays in different lights, and prominent opticians, are full of curious information and useful hints not elsewhere to be found gathered together. The book ought to be invaluable to opticians, of use to oculists, and of a high degree of interest to both classes of workers in practical optics.

H. D. B.

A Manual of Obstetrics. By A. F. A. King, A.M., M.D.

A new edition of Dr. King's manual has recently been issued. The work is dedicated by Dr. King to his students, and although containing all necessary information as a hand book for practitioners, it is essentially a student's book. Each chapter opens with an explanation of the subject to be dealt with by giving the etiology of technical words, thereby preparing the student for the work before him and removing at once the diffi-

culty so many are apt to meet with. The whole work is written in simple and unmistakable language—the accompanying wood cuts also add to its value—and the arrangement of subjects is likewise deserving of mention. The work is a gem in its class and does full credit to its author. It would be useless to enter into the detailed merits of this little book. A casual perusal of its pages will at once convince any one of its value.

A System of Practical Therapeutics. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Assisted by Walter Crystie, M. D., formerly Instructor in Physical Diagnosis in the University of Pennsylvania. Vol. II: Fevers, Diseases of the Respiratory System, Circulatory System and Hæmatoporetic System, Diseases of the Digestive System. Vol. III: Diseases of the Skin, Diseases of the Nervous System, Diseases of the Genito-Urinary Apparatus, Diseases of the Eye, Diseases of the Ear. With illustrations. Philadelphia, Lea Brothers & Co. 1892.

Volumes II and III complete. Dr. Hare's admirable system of therapeutics. The unusual merit of the first volume bade us look for a complete and scientific exposition of the subject in those that should follow, and the editor has not disappointed us. Special articles have been prepared by men familiar by long experience with the subjects of which they treat, and are to be commended for their conciseness and clearness, as well as for the fact that the methods of treatment are the very latest known to medical science.

The work is in all respects a fitting supplement to Pepper's System of Medicine, though each system is, of course, complete in itself.

It were difficult in a work where such a variety of subjects are treated to single out any article as superior to the rest, and we will only mention the articles on "Morbid Habits" and "Diseases of the Uterus" as having interested us most, possibly on account of the unique manner in which they are presented. The former is divided up into the following headings: Alcoholism and Inebriety; Opium Inebriety; Chloroformism; Chloralism; Cocainism; Arsenic Inebriety; Ether Inebriety; Cologne-Water Habit; Coffee Inebriety; Tea Inebriety. Reference is also made to the gelsemium, Jamaica ginger, and paraldehyde habits. In the second article referred to, the discussion on the subject of the relations of dress to uterine disease is an

exceedingly interesting one, and is discussed with great ability. The subject is illustrated by excellent cuts, and the argument against the use of corsets quite convincing. We note with pleasure that a well written article on "Diseases of the Pleura" is from the facile pen of Dr. Rudolph Matas, of New Orleans.

H. W. B.

A Clinical Text Book of Medical Diagnosis for Physicians and Students Based on the Most Recent Methods of Examination. By Oswald Vierordt, M. D., Professor of Medicine at the University of Heidelberg, etc. Authorized translation from the second improved and enlarged German edition, with additions, by Francis H. Stuart, A. M., M. D., New York, with 178 illustrations. Philadelphia, W. B. Sanders, (Cloth, \$4 net; sheep, \$5 net.)

In this translation, Dr. Stuart places before English-speaking practitioners a very practical and valuable work on the the methods of investigating disease. Dr. Vierordt had adopted a certain plan in the course of his lectures on diagnosis at the University of Leipsic. All thorough and comprehensive works on medical diagnosis must have a strong family resemblance, but each author can infuse his own individuality into his work by arranging his material as he thinks best, or by emphasizing the features that should more particularly receive attention. While Vierordt fully appreciates the services rendered by the fine mechanical and chemical aids, he dwells particularly on the use of the unaided senses, and endeavors to develop this feature of the subject without neglecting the other means of arriving at a correct diagnosis.

In this respect he occupies the same ground in diagnosis that Dr. Vincenz Meyer, of Naples, occupies in the field of therapeutics. The latter author, in his work "Die alte und die neue Medizin," vigorously protests against an abandonment of what was good in the older methods for later, but not fully tried, methods, the chief merit of which is novelty. The medical mind should always be in a condition of plastic receptivity; but there should be some part of it reserved for the preservation of that which experience has shown to be good and worthy of survival. In describing the points that may be obtained by the unaided senses, Vierordt writes as would any author before the advent of the sphygmograph, the microscope, and other treasures of the medical armamentarium. The uses of all these instruments are fully described in the proper places.

An analysis of a complete work on medical diagnosis would be a synopsis of the work. Such an analysis is not

necessary even for a tyro in medicine, since the scope of such a work is known to all, and it becomes necessary to specify only those points that are particularly good among material that is all good. The language is clear, and bears witness to the intelligence and industry of the translator.

The figures are all valuable and well executed; many of them are colored, especially those representing the micro-organisms that are of diagnostic importance. The index covers ninety-one pages; the value of a complete index in a work of this sort can readily be appreciated by a busy practitioner who desires to inform himself quickly on an obscure case.

On the whole we may confidently recommend Vierordt's "Diagnosis" to those for whom it is intended as a trusty guide in the tangled paths of medical search. A. McS.

The Science and Art of Midwifery. By William Thompson Lusk, A. M., M. D., Professor of Obstetrics and Diseases of Women and Children in the Bellevue Hospital Medical College. New edition, revised and enlarged, with numerous illustrations. D. Appleton & Co., New York. Armand Hawkins, New Orleans. Price \$5.

Alive to the importance of the fruitful recent studies of anatomy, pathology and physiology, this great teacher, with a progressive spirit highly creditable to himself and advantageous to the profession, presents us with this fourth edition of his valuable work on obstetrics. The third edition was published only seven years ago, yet the present work reads almost like an entirely new book. While obstetrics, in the past decade, has not made the great strides accomplished by gynecology, it has sufficiently advanced to require a fresh work on the subject. Prof. Lusk deserves the thanks of the profession and of the people for the excellent manner in which these requirements have been recognized and fulfilled.

The chapter on the Management of the Puerperal State is replete with sound sense. The question of the vaginal douche in this condition is properly treated. In this connection the author says: "Against its employment it may be urged that, in spite of the addition of carbolic acid or corrosive sublimate there is statistical evidence that the vaginal douche augments the chances of infection. In hospital practice it has invariably increased the morbidity and mortality rate. * * *

I still occasionally employ it—not, however, in a prophylactic, but because of the property possessed by hot vaginal injection to assuage pelvic discomfort."

The Physiology and Mechanism of Labor are thoroughly handled and written in a style easily read and understood. The illustrations are well executed, and clearly picture the teaching of the text.

The chapter on extra-uterine pregnancy deserves careful study from beginning to end. The following is contained in that part relating to diagnosis: "Cases of retroflexion of the gravid uterus with incarceration are often difficult to distinguish from extra-uterine pregnancy." "A review of the subject of diagnosis makes it apparent that many cases of ectopic pregnancy present no symptoms previous to rupture. In another class the existence of a suspicious tumor with few or none of the corroborative signs should lead to a waiting policy, or, when the symptoms are of a threatening character, to an explorative laparotomy."

The chapter on Puerperal Fever is honest, exhaustive and fresh.

In the discussion of the subject of Cæsarian Section appears the following: "It has been said that if a woman, knowing herself to be incapable of bearing living children, exposes herself to the repetition of pregnancy, it becomes the duty of the physician to perform the Cæsarian Section in the interest of the child. The duty of the physician is, however, to his patient. He is not to constitute himself either judge or executioner." It is gratifying to hear so experienced and so just a man express himself forcibly on this important and unnecessarily mooted question.

The different operations, Cæsarian Section, Porro's and Thomas' Laparo-elytrotomy are minutely and clearly described.

All in all, the book is full of recent ideas, is well and clearly written, nicely printed, thoroughly illustrated, and is one that should be carefully studied by every practitioner and student of medicine.

MICHINARD.

Diseases of Women: A Manual of Non-Surgical Gynecology, designed especially for the use of students and general practitioners. By F. H. Davenport, A. B., M. D., instructor in Gynecology, Harvard Medical School. Second edition, revised and enlarged. Numerous illustrations. Lea Brothers & Co., Philadelphia.

The objects of this book are: "In the first place, to give the student clearly, but with considerable detail, the elementary principles of the methods of examination and the simple forms of treatment of the most common diseases of the pelvic

organs; and, in the second place, to help the busy practitioner to understand and treat the gynecological cases which he meets with in the course of his every-day practice." This extensive quotation from the book has been done by the reviewer, because, after having read the work from preface to the end of the last chapter, he is fairly compelled to say that while those may be its objects, he fears it has failed in its good intentions. From its general character we would suppose that it is intended to facilitate rapid diagnosis. Everything is brief; and it is the very brevity which destroys its usefulness.

The directions for making digital examination are very deficient. The various treatments are well suggested, excepting that the reviewer can not see why a Sims speculum should be used to facilitate the introduction of a retroversion pessary. But the articles on diagnosis are rendered useless, because the scope of the work is too limited. The whole thing looks like an attempt at a short cut to a certain object which can never be attained without long continued hard work. All such abridged work should, in the opinion of the reviewer, be discouraged.

MICHINARD.

PUBLICATIONS RECEIVED.

Transactions of the American Otological Society, Twenty-first Annual Meeting, July 19, 1892. Vol. V, part 2.

Nomenclatura Morborum Auris et Nomenclatura Morborum Nasi et Naso-Pharyngis. Boston, 1892.

Naphey's Modern Therapeutics, Medical and Surgical, including Diseases of Women and Children. Ninth edition, revised and enlarged, Vol. I. P. Blakiston, Son & Co.

Diseases of the Kidneys and Bladder; a Text Book for Students of Medicine. By W. F. McNutt, M. D., M. R. C. S. Ed., etc. Philadelphia: J. B. Lippincott Co.

Transactions of the American Surgical Association. Vol. X.

Ready Reference Hand-Book of Diseases of the Skin. By George Thomas Jackson, M. D., (Col.). Lea Bros. & Co.

Leonard's Physician's Day Book.

Diseases of the Lungs, Heart and Kidneys. By N. S. Davis, Jr., A. M., M. D. F. A. Davis Publishing Company.

Histology, Pathology and Bacteriology. By Bennett S. Beach, M. D. Students' Quiz Series. Lea Bros. & Co.

Gynecology. By G. W. Bratenahl, M. D., and Sinclair Tousey, M. D. Students' Quiz Series. Lea Bros. & Co.

Practice of Medicine. By Edwin T. Doubleday, M. D., and J. Darwin Nagel, M. D. Students' Quiz Series. Lea Bros. & Co.

Addresses and Essays. By G. Frank Lydston, M. D. Second edition. Published by Renz & Henry, Louisville, Ky.

Over One Thousand Prescriptions, or favorite formulæ of various authors, teachers and practising physicians. Detroit: Illustrated Medical Journal Company.

Epitome of Mental Diseases, etc. By James Shaw, M. D., Qu. Univ., Irel. New York: E. B. Treat, 5 Cooper Union.

Geographical Pathology; an inquiry into the geographical distribution

of infective and climatic diseases. By Andrew Davidson, M. D., F. R. C. P. Ed. Two volumes. New York: D. Appleton & Co.

Transactions of the Association of American Physicians. Seventh session, held at Washington, D. C., May 24, 25 and 26, 1892. Vol. VII.

A Practical Treatise on Diseases of the Skin. By John V. Shoemaker, A. M., M. D. New York: D. Appleton & Co., 1892.

Cure Radicale des Hernies, avec une Etude Statistique de Deux Cent Soixante-quinze Opérations et 50 Figures intercalées dans le Texte. Par le Dr. Just Lucas-Championnière. Paris: Rueff et Cie., éditeurs, 1892.

Tuberculosis of Bones and Joints. By N. Senn, Ph. D. F. A. Davis Publishing Co., 1892.

Contributions of Physicians to English and American Literature. By Robt. C. Kenner, M. D. Detroit: Geo. S. Davis.

Medical Review Visiting List, Perpetual.

Leonard's Physician's Day Book.

State News and Medical Items.

CHARITY HOSPITAL.

The board of administrators of the Charity Hospital met on Oct., 3, 1893, in regular monthly session, Chairman Hugh McManus presiding and members G. W. Sentell, A. R. Brousseau, Dr. E. T. Shepard and Edwin Marks, secretary, present.

Mr. A. R. Brousseau and Dr. Shepard, who are newly appointed members, succeeding respectively members Kellar and Wiedendahl, presented their commissions, and, through the chairman, were officially and heartily welcomed.

Dr. J. D. Bloom, assistant house surgeon, reported officially the death of Ambulance Student H. F. Thigpen, which occurred September 8, and suggested that the board pass suitable resolutions relative thereto.

The following resolutions were, therefore, adopted:

Resolved, That by the death of Resident Student H. F. Thigpen the hospital loses a valuable auxiliary to the corps of young men composing that branch of its service. His conduct was always exemplary, and he was assiduous in his duties and of marked ability.

Resolved, That a duly attested copy of the above be transmitted to his family, with the assurance of the board's sympathy with them in their sad loss.

Mr. G. W. Sentell, chairman of the finance committee,

submitted the following report of the receipts and expenditures during the month of September:

From ordinary sources.....	\$1,824 23
From donations.....	150 00

Total	\$1,974 23
Cash balance September 1.....	\$43,494 68

Total	\$45,468 91
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Disbursements—

On account improvements.....	\$3,906 56
Ordinary expenses.....	8,694 61

Total	\$12,601 17
Cash balance September 30.....	32,867 74
Official legacy fund, Whitney National Bank.....	20,000 00

Clerk J. C. de Mobry reported as follows for the month of September:

Number of patients remaining Sept. 1, 1892, 647; number of patients admitted, 736; foreigners, 211; of the United States, 525; males, 569; under ten years, 7; females, 151; under ten years, 9; number of patients discharged, 617; males, 493; under ten years, males, 2; females, 11; number of patients died, 98; males, 69; under ten years, 3; males, 25; females, under ten years, 1; number of patients remaining in hospital, Oct. 1, 668; males, 441; females, 227; daily average of patients during the month, 668; out-door clinic consultations, men and boys, 2756; out-door consultations, women and children, 2146.

FINANCIAL REPORT.

Amount received from patients, \$13; amount gate fees, \$260.85; amount received from death certificates, \$1.50; amount received from legal certificates, \$4; total, \$15; amount paid over to Sister Agnes, \$297.35; pay ward being closed for repairs.

AMBULANCE SERVICE.

Surgical calls, 58; medical, 18; dressed, 35; conveyed home, 10; obstetrical, 3; died, 5; false calls, 1; refused, 6; not needed, 3; transfer calls, 5; total, 144; two pay calls, \$20; average time, 48 9-10 minutes.

The following were appointed by the board:

Visiting Surgeons—Drs. S. Logan, E. Souchon, E. S. Lewis, R. Matas, F. W. Parham, P. Michinard, C. Chassaig-

nac, G. B. Lawrason, W. E. Parker, W. L. Bickham, E. D. Fenner, L. Sexton, S. P. Delaup, H. J. Schenck, Denegré Martin, R. U. Borde, H. S. Lewis and S. F. Schmittle.

Visiting Physicians—Drs. J. B. Elliott, Joseph Jones, L. F. Reynaud, Hy. Bayon, J. H. Bemiss, F. H. Brickell, T. S. Kennedy, P. E. Archinard, O. L. Pothier, J. Laurens, A. R. Traham, H. S. Cocram, I. T. DeGrange, J. M. Elliott, A. J. Bloch, S. M. Fortier, A. Ledaux and J. M. Soniat.

Oculists—Drs. E. W. Jones, H. D. Bruns and E. A. Robin.

Aurists and Laryngologists—Drs. O. Joachim and E. W. Jones.

Dermatologist—Dr. Isadore Dyer.

Dentists—Dr. A. G. Friedrichs and S. D. Archinard.

The following resolution, by Mr. G. W. Sentell, was adopted:

“The Board of Administrators of the Charity Hospital, in regular meeting assembled, note with sincere regret the death of their late member, Dr. J. H. Wiedendahl.

“Through the four years of his incumbency as an administrator he discharged the important duties of his trust with zeal and ability.

“His sterling character as a man, his acknowledged skill and usefulness as a physician, and his broad-minded and unceasing charity endeared him in public estimation.

“We tender to his bereaved family our earnest sympathies in their distress.”

Secretary Marks read a number of bids for the painting of the two outdoor clinic buildings, according to advertised specifications. The lowest bid, that of E. A. Boseley, who proposes to do the work for \$650, was accepted. The two buildings are to be painted on the outside and the openings only.

There being no other business the board adjourned.

ALVARENGA PRIZE OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.—The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Señor Alvarenga, and amounting to about One Hundred and Eighty Dollars, will be made on July 14, 1893, provided that an Essay deemed by the Committee of Award to be worthy of the prize shall have been offered.

Essays intended for competition may be upon any subject

in Medicine, but can not have been published, and must be received by the secretary of the college on or before May 1, 1893.

Each essay must be sent without signature, but must be plainly marked with a motto and be accompanied by a sealed envelope having on its outside the motto of the paper and within it the name and address of the author.

It is a condition of competition that the successful essay or a copy of it shall remain in possession of the college; other essays will be returned upon application within three months after the award.

Dr. Randall Hunt was elected president of the Shreveport Medical Society at its last meeting, and Dr. W. Egan was elected secretary.

REMOVAL FOR THE CONVENIENCE OF THE MEDICAL JOURNALS AND MEDICAL JOURNAL ADVERTISERS.—W. P. Cleary, long and favorably known to and trusted by this journal, has removed his office to 294 Broadway, New York, from which location he will be glad to transact any business entrusted to him in the line of encouraging and promoting advertising connection between respectable and responsible advertisers and the best medical journals in every section of the United States. Preferred space promptly negotiated when exclusive right of same is placed with him.

Dr. J. C. Brown, an old and well-known physician and planter of Red River parish, died recently.

Dr. Joseph Holt, of New Orleans, physician, attended the annual meeting of the Tri-State Medical Society in Chattanooga, and delivered an able address on "Pestilential Invasion."

Dr. R. J. Francez, the oldest physician of Lafayette, died on October 28, 1892. He was a prominent planter and widely esteemed citizen.

MARRIED.—Dr. I. E. Webb, and Miss Addie, daughter of Col. A. B. Mayes, both of McKinney, Texas, were married on October 23, 1892.

MORTUARY REPORT OF NEW ORLEANS.

FOR SEPTEMBER, 1892.

CAUSE.	White	Colored...	Male.....	Female....	Adults ...	Children.	Total
Fever, Yellow							
“ Malarial (unclassified)....	10	2	7	5	11	1	12
“ Intermittent	1		1			1	1
“ Remittent	10	2	9	3	9	3	12
“ Congestive.....	10	1	9	2	5	6	11
“ Typho	3	2	4	1	2	3	5
“ Typhoid or Enteric.....	9	1	6	4	8	2	10
“ Puerperal	2	1		3	3		3
Influenza.....							
Scarlatina							
Measles							
Diphtheria							
Whooping Cough	5	1	3	3		6	6
Meningitis	6	1	4	3	4	3	7
Pneumonia.....	8	17	14	11	8	17	25
Bronchitis	9	5	6	8	4	10	14
Consumption.....	51	40	44	47	90	1	91
Cancer	7	5	5	7	12		12
Congestion of Brain.....	4		1	3	3	1	4
Bright's Disease (Nephritis)	14	12	18	8	26		26
Diarrhœa (Enteritis)	15	15	17	13	22	8	30
Cholera Infantum	2	1	2	1		3	3
Dysentery.....	3	6	8	1	7	2	9
Debility, General		3	1	2	3		3
“ Senile	16	10	14	12	26		26
“ Infantile	3	2	4	1		5	5
All other causes	145	79	136	88	151	73	224
TOTAL	333	206	313	226	394	145	539

Still-born Children—White, 23; colored, 14; total, 37.

Population of City—White, 184,500; colored, 69,500; total, 254,000.

Death Rate per 1000 per annum for month—White, 21.65; colored, 35.56; total, 25.46.

F. W. PARHAM, M. D.,
Chief Sanitary Inspector

METEOROLOGICAL SUMMARY—SEPTEMBER.

STATION—NEW ORLEANS.

Date.....	TEMPERATURE.			Precipn. in inches and hundredths ..	SUMMARY.
	Mean	Max.	Min.		
1	79	85	73	.59	Mean barometer, 30.044.
2	76	84	69	0	Highest barometer, 30.17, 17th.
3	80	88	73	0	Lowest barometer, 29.72, 12th.
4	80	86	73	.77	Mean temperature, 76.6.
5	78	87	70	.82	Highest temp., 89, 26th; lowest, 64, 15th.
6	78	85	72	.12	Greatest daily range of temperature, 17, 5-17th.
7	78	86	71	0	Least daily range of temperature, 4, 12th.
8	78	84	72	.19	MEAN TEMPERATURE FOR THIS MONTH IN—
9	76	83	70	.40	1871..... 76.0 1877..... 78.0 1883..... 79.0 1889..... 79.0
10	79	84	74	.24	1872..... 79.0 1878..... 74.0 1884..... 81.0 1890..... 78.0
11	76	81	72	.62	1873..... 78.0 1879..... 79.0 1885..... 77.0 1891..... 78.0
12	73	75	71	.97	1874..... 79.0 1880..... 76.0 1886..... 78.0 1892..... 77.0
13	76	80	71	.10	1875..... 76.0 1881..... 80.0 1887..... 77.0
14	74	81	67	0	1876..... 79.0 1882..... 78.0 1888..... 75.0
15	72	79	64	0	Total deficiency in temp'ture during month, 52.
16	72	80	64	0	Total deficiency in temp'ture since Jan. 1, 424.
17	74	83	66	0	Prevailing direction of wind, N. E.
18	76	84	68	0	Total movement of wind, 6583 miles.
19	76	83	70	0	*Maximum velocity of wind, direction and date,
20	75	82	68	0	30 miles, from N. E., 8th
21	77	84	70	0	Total precipitation, 6.33 inches.
22	78	85	71	0	Number of days on which .or inch or more of
23	79	86	72	0	precipitation fell, 12.
24	78	84	72	.73	TOTAL PRECIPITATION (IN INCHES AND HUNDREDTHS)
25	81	88	74	0	FOR THIS MONTH IN—
26	82	89	75	0	1871..... 6.59 1877..... 13.21 1883..... 0.25 1889..... 6.40
27	76	82	70	0	1872..... 2.10 1878..... 2.64 1884..... 3.12 1890..... 2.85
28	74	81	66	0	1873..... 3.21 1879..... 3.15 1885..... 13.55 1891..... 3.43
29	74	81	68	0	1874..... 4.21 1880..... 7.48 1886..... 4.09 1892..... 0.33
30	70	73	67	.78	1875..... 7.89 1881..... 4.47 1887..... 6.51
31	....	....	....	.....	1876..... 0.26 1882..... 1.59 1888..... 4.15
					Total excess in precipitation during month, 1.40'
					Total deficiency in precip'n since Jan. 1, 2.56'
					Number of cloudless days, 17; partly cloudy
					days, 9; cloudy days, 4.
					Dates of frost, —.
					Mean maximum temperature, 83.
					Mean minimum temperature, 70.

NOTE.—Barometer reduced to sea level. The T indicates trace of precipitation.
To be taken from any five-minute record.

G. E. HUNT, *Local Forecast Official.*

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Original Articles.

[No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the first day of the month preceeding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a written order for the same accompany the paper.]

OSTEOTOMY OF FEMUR FOR GENU-VALGUM.

By DR. GEO. H. LEE, GALVESTON, TEXAS.

George, a small negro, age 6 years, with a congenital genu-valgum of right lower extremity, which interfered very much with the use of his limb, was seen in the clinic at John Sealy Hospital during May (1892). The boy's general health, physical and mental, was excellent. He presented no evidence of any constitutional affection past or present. Nor was there any history of past illness.

The deformity, which is well shown in the accompanying engraving, was sufficient to prevent any nearer approximation of the internal malleoli than eight inches with the internal condyles closely together—although the left leg was very straight and well formed. The right knee-joint itself was apparently perfect, permitting complete and satisfactory extension and flexion; the deformity being due solely to the fact that the axis of the joint was at an improper angle with the shaft of the bone.

The extreme deformity, the boy's excellent health, his social condition, which was such as to render it improbable he could be kept under observation and treatment sufficiently long even if it were possible to properly adapt an external splint after Sayre, led me to decide on an osteotomy of the femur for his relief.

The development and gradual perfection of this operation is interesting, as the following cuts will briefly and quickly illustrate.

Fig. 1 exhibits the line of Ogston's operation (1876), which was done by making a subcutaneous tunnel from the inner side three and one-half inches above the tip of the inner condyle, ending in the joint, and dividing the bone from before backward with an Adams saw nearly through to the popliteal space. The remaining bone was then fractured by extending the limb and forcibly straightening the member, the inner condyle sliding up so as to completely correct the deformity.

The objections to the operation are the depth of the portion of bone operated on, the danger of wounding the anastomotica magna (which has occurred on several occasions) or the internal saphenous vein, and the fact that the joint is entered, which even under antiseptic or asepsis is certainly an extremely undesirable complication. In addition there is to be considered the imminent danger to the popliteal artery (it was divided completely in one osteotomy and was perforated by a spiculum of bone in another) or of some of its branches which lie immediately against the posterior surface of the femur and toward which the saw is directed. And again, that the moving of the inner condyle upward may and indeed must impair to a greater or less degree the integrity of the joint by interfering with the contour of the articular surface upon the condyles and its adaptability to the corresponding surface on the tibia.

Fig. 2 illustrates Reeves' modification of Ogston's line of section. This surgeon used the osteotome instead of the saw, undertook to stop the section of bone short of interference with the articular cartilage, and fractured the remaining portion of the bone by force. This procedure was open to all those objections which may be urged against operations upon the inner side of the leg. It is a step forward, in that it attempts to avoid entrance into the joint; yet it is difficult to see how in practice this could always be accomplished. There would probably be less danger of wounding the popliteal vessels than when using the saw, yet the articular surface of the cartilage would be disturbed as in Ogston's operation.

Fig. 3 illustrates the procedure proposed and put into practice by Mr. Chiene (1879).



Fig. 1



Fig. 2



Fig. 3



Fig. 4



Fig. 5



Fig. 6

After having freely divided the soft parts and turning back the periosteum, he removed with an osteotome a wedge-shaped piece of bone above the epiphyseal line; the base of this wedge being thicker or thinner according to the amount of the deformity, and then turned the cartilage upward, straightening the limb.

Fig. 4 represents Macewen's first operation, consisting in the removal of a wedge of bone in Ogston's line. As both the last operations were from the inner side, both have this disadvantage. The removal of a wedge of bone is much more difficult than a simple section; requires more manipulation, involves more danger, especially in the line used by Macewen.

In both these operations the integrity of the articular surface is disturbed, though probably less so than where the condyle is displaced upward.

All the foregoing procedures involve more or less the nutrition of the epiphysis, and have been followed by atrophy of the internal condyle—an undesirable result which has never occurred in operations through the shaft. This atrophy has been sufficient in some cases to produce a genu extrorsum.

Fig. 5 illustrates Macewen's later operation; a distinct advance, in that he removed a wedge of bone from the shaft of the femur, avoiding injury or chance of injury to the joint and also to the epiphysis; and yet open to the objections urged against wedge operations and against all operations from the inner side.

Barwell added to this by correcting half the deformity by this means, and later making a section of the tibia to correct the other half; to my mind an unnecessary increase of operative manipulation and of risk, except in cases of extreme deformity where a section of the tibia is demanded by marked abnormal shape of that bone.

The latest procedure, and in all respects the most desirable, is MacCormac's (Fig. 6).

In this the bone is approached from the outer side where there are no vessels to be injured. A section of the shaft of the femur is made at a point just above the condyles three-fourths through the bone; the remainder of the shaft fractured by force while the limb is in extension and the limb straightened.

On the outer side there are no large vessels to be injured. A simple section permits prompt and satisfactory correction of the deformity. The nice points about the operation are to avoid the popliteal on the posterior and the synovial membrane of the knee joint on the anterior surface of the bone. The observance of strict antisepsis is of course necessary.

MacCormac's operation was performed in the present case, the leg easily straightened, and then put up in a double, long splint such as used by Hamilton in small children. His recovery was entirely without incident of any kind (no fever and no pain). The second photograph showing the result was taken a few days more than four weeks after the operation.

At present writing (November, 1892) the limb is in excellent condition, and the boy has perfect use of the member.

169 Market Street.

THE DISEASE OF SARAH, ABRAHAM'S WIFE.

By HENRY WILLIAM BLANC, B. S., M.D.

Professor of Materia Medica, Therapeutics and Dermatology in the Sewanee Medical College.

In the twelfth chapter of the Book of Genesis, a story is told of Abram and his wife, Sarai (afterward called Abraham and Sarah), which has so many points of resemblance to another story told in the twentieth chapter of the same book that we are at once led to suspect them to be but different versions of the same historical incident, drawn, perhaps, as is claimed by certain commentators, from two totally distinct sources.

However this may be, it behooves us to closely investigate both stories, as they mutually explain each other; and for the better understanding of the reader they are here arranged in parallel columns, directly transcribed from the revised version:

CHAPTER XII.

10. And there was a famine in the land: And Abram went down into Egypt to sojourn there: for the famine was sore in the land.

11. And it came to pass, when he was come near to enter into Egypt, that he said unto Sarai his wife, Behold now, I know that thou art a fair woman to look upon;

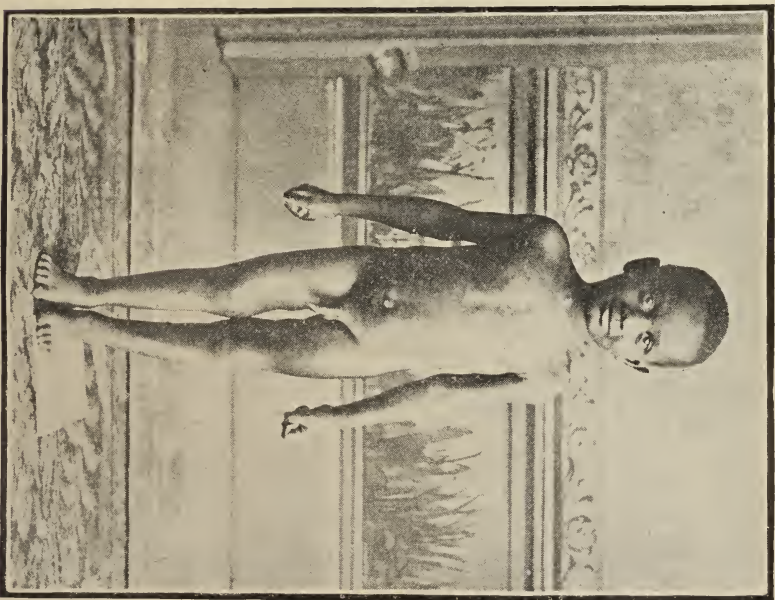
CHAPTER XX.

1. And Abraham journeyed from thence toward the land of the South, and dwelt between Kadesh and Shur; and he journeyed into Gerar.

2. And Abraham said of Sarah his wife, She is my sister: and Abimelech, king of Gerar, sent, and took Sarah.



THIS FIGURE SHOWS CONDITION BEFORE OPERATION.



AFTER OPERATION.

12. And it shall come to pass when the Egyptians shall see thee, that they will say, This is his wife: and they will kill me, but they will save thee alive.

13. Say, I pray thee, thou art my sister: that it may be well with me for thy sake, and that my soul may live because of thee.

14. And it came to pass that, when Abram was come into Egypt, the Egyptians beheld the woman that she was very fair.

15. And the princes of Pharaoh saw her and praised her to Pharaoh: and the woman was taken into Pharaoh's house.

16. And he entreated Abram well for her sake: and he had sheep, and oxen, and he-asses, and men servants, and maid servants, and she-asses, and camels.

17. And the Lord plagued Pharaoh and his house with great plagues because of Saraï, Abram's wife.

18. And Pharaoh called Abram, and said, What is this that thou hast done unto me? Why didst thou not tell me that she was thy wife?

19. Why saidst thou she is my sister? so that I took her to be my wife: now therefore behold thy wife, take her and go thy way.

20. And Pharaoh gave men charge concerning him: and they brought him on the way, and his wife, and all that he had.

CHAPTER XIII.

1. And Abram went up out of Egypt, he, and his wife, and all that he had, and Lot with him, into the South.

2. And Abram was very rich in cattle, in silver, and in gold.

3. But God came to Abimelech in a dream of the night, and said to him, Behold, thou art but a dead man because of the woman which thou hast taken; for she is a man's wife.

4. Now Abimelech had not come near her; and he said, Lord, wilt thou slay even a righteous nation?

5. Said he not himself unto me, She is my sister? and she, even she herself said, he is my brother: in the integrity of my heart and the innocency of my hands have I done this.

* * * * *

9. Then Abimelech called Abraham, and said unto him, What hast thou done unto us? and wherein have I sinned against thee, that thou hast brought on me and on my kingdom a great sin? Thou hast done deeds unto me that ought not to be done.

10. And Abimelech said unto Abraham, What sawest thou, that thou hast done this thing?

11. And Abraham said, Because I thought, Surely the fear of God is not in this place; and they will slay me for my wife's sake.

12. And moreover she is indeed my sister, the daughter of my father, but not the daughter of my mother; and she became my wife.

13. And it came to pass, when God caused me to wander from my father's house, that I said unto her, This is thy kindness which thou shalt show unto me; at every place whither we shall come, say of me, He is my brother.

14. And Abimelech took sheep and oxen, and men servants and women servants, and gave them unto Abraham, and restored him Sarah, his wife.

* * * * *

17. And Abraham prayed unto God; and God healed Abimelech, and his wife and his maid servants; and they bare children.

18. For the Lord had fast closed up all the wombs of the house of Abimelech, because of Sarah, Abraham's wife.

In considering these two recitals we will refer chiefly to that of the left hand column, applying the other whenever occasion permits.

To the medical investigator the most striking feature of this story is the fact that Pharaoh and his house were plagued "with great plagues," or diseases, and that this visitation came

upon them *because of Saraï, Abram's wife*. Sarah had been taken away from her husband and placed in the harem of this oriental monarch; and the word "because" in the text shows that the disease which he acquired was both after she was received there and because she was received there, and consequently not only *post*, but *propter hoc*.

Pharaoh had taken the woman to be his wife, probably not with any show of force other than that of an imperial command, and Abraham, who had some time before anticipated this action, had doubtless yielded without a murmur, accepting not with reluctance the royal gifts of cattle, men servants and maid servants. His reasons for expecting the Egyptian ruler to act as he did were probably twofold: first, because Sarah was of handsome appearance, and, being a native of Mesopotamia, fairer than the dark-skinned women of Egypt; and, second, because she was subject to the gaze of the Pharaoh and his courtiers by posing as a single woman, not wearing the veil, which was worn as a token of subjection by betrothed and married women in the East. So it came about that the "princes of Pharaoh"—rather the sycophants, the pimps about the court, ever watchful for a ripe subject to satisfy the lust of their monarch—saw and praised her beauty; and she was "taken into Pharaoh's house." Following upon this we find that Pharaoh and his house became diseased. The expression "his house" might be understood as meaning his family, courtiers, slaves and all about him; but in the story of Abimelech we are told that "his wife and his maid servants" were those affected, and this is our interpretation with reference to this case.

Suddenly Pharaoh discovers that his new wife had been married before he took her. How this discovery was made we are not told, and commentators have been puzzled to give an explanation. It is not likely that Sarah would have volunteered the information. We have but to refer to the text to find in what direction to pursue our inquiries. We are told that when the monarch and his harem were attacked with disease he began to accuse Abraham of underhand practices.

Josephus says that Pharaoh consulted the priests, and doubtless he did, for they were the physicians of the time.

Their view of the case must have been this: The king has taken into his house a strange woman who has given him a disease, which he, in turn, has given to his wives. This disease is of genital origin, and not one which a clean and healthy woman, or one who was previously a virgin, is likely to have.

Confronted with these facts, Sarah may have been frightened into a confession that Abraham was her husband, rather than suffer the imputation of having led a loose life before coming to Egypt.

Much to his surprise Abraham discovers that the king is not indignant at the subterfuge practised upon him. Pharaoh is *awed*, for the creed of his country makes adultery a heinous crime, and he has unwittingly, but undeniably, committed that act. Licentious by nature, and perhaps by education, the king sees no harm in adding one more wife to his harem, but his moral sense is shocked by the contemplation of the crime of adultery. Had he not committed the act we suspect that anger would have taken the place of awe. Besides, he finds that following upon the sin he has committed comes a punishment to himself and household in the tangible form of disease, and in this belief he is probably encouraged by the priests. So we do not wonder that he lets Abraham go unscathed lest his continued presence, like that of his nation many years after, might work harm to the whole people.

On the occasion of parting with Abraham and his wife the words of Pharaoh and Abimelech are as majestic as they are reproachful, but it is quite apparent that the courteous treatment extended to Abraham by these two kings was due less to their grief at the unintentional crime of adultery than to their fear lest they might be again visited with a plague, the peculiar character of which pointed out to them the nature of their sin.

Perhaps the finest piece of sarcasm in Holy Writ is to be found in the words of Abimelech, when, after settling matters with Abraham, he turns to Sarah and says: "Behold, I have given thy brother a thousand pieces of silver; behold, it is for thee a covering of the eyes to all that are with thee; and before all men thou art righted." In other words: "Let the money

that I have given to Abraham buy a veil, that your face may hereafter be covered, as is seemly with married women; and now, my silver being accepted, in the eyes of all men we are even with each other.”

In the scriptural passage there is a world of sarcasm alone in the use of the word *brother*, instead of husband. We have seen that the malady acquired by Pharaoh and his wives was received from Sarah—it was, therefore, a contagious or communicable disease. It has also been said that it was one of genital origin. Let us look further into the matter. In the story of Abimelech we find that the disease that afflicted this ruler and his wife and maid servants, had produced in the latter sterility. “For the Lord had fast closed up all the wombs of the house of Abimelech, because of Sarah, Abraham’s wife.”

Surely the ordinary contagious diseases, such as the eruptive fevers and the like, could hardly be cited as producers of sterility. It must, then, have been some poison brought in contact with the organs that were made sterile, in other words, a virus acquired in sexual intercourse.

There is reason to think that Sarah, confused though she was in notions of morality, was willing and anxious to draw the line somewhere, and did not permit the approaches of any of the men about the court, so that the disease was imparted by her only to the king, and by him to the women of his household. There is no statement that any of the men were diseased, or any children, or any persons outside the court.

There are but two venereal diseases that will account for the conditions and symptoms detailed above, namely, syphilis and gonorrhœa.

Our belief is that Sarah’s disease was *gonorrhœa*.

The admirable *brochure* of Dr. P. Hamonic, of Paris,* has supplied us with some of the arguments used in this paper, but his conclusion that Sarah’s disease was syphilis is certainly not borne out by his argument, nor by the facts of the biblical text, some of which he has failed to utilize.

These are his conclusions, which we submit as part of our argument to prove that the disease was gonorrhœa: “Sarah was sterile a part of her life, as were also the infected wives of

* *Annales de Dermatologie et de Syphiligraphie*, p. 391, 1887.

Abimelech. The affection transmitted by Sarah was always of genital origin." "On account of its great transmissibility, its long period of virulence, and the relations which seemed to exist between it and sterility, it is reasonable to suppose that this disease was syphilis (gonorrhœa)." "It disappeared with age in Sarah, who became pregnant late, which is a good proof that her sterility was not due to an organic cause."

"Outside of syphilis (gonorrhœa) we can not see any other disease of genital origin which could correspond with the foregoing facts."

While the disease of Sarah produced in her, and in other women affected by it, sterility, there were no constitutional symptoms of any mark, no alopecia, nor disfigurement. It was a perfectly curable disease, and every one afflicted with it afterward became healed. Now, while we are willing to grant that there are many cases of syphilis that do not produce disfigurement under the improved scientific methods of this present day, it is unnatural to suppose that a case of syphilis as virulent as Sarah's must have been would not produce at least some disfiguring mark that would excite comment. How many persons there were who acquired the disease from Sarah, directly or indirectly, we do not know, but we do know that all of them got well, and this would not be possible if the disease were an untreated attack of syphilis.

Syphilis produces in women a tendency to miscarry, or to bear feeble children. It may even produce sterility, as Hamonic has reasoned, but it is a most unlikely thing that a woman infected with syphilis, a disease that lowers the vitality of every molecule of protoplasm in the human economy, and follows to the grave most of those even who have enjoyed the benefits of specific treatment—it is most unlikely that such a woman should, in advanced life, acquire a renewal of energy and give birth to a healthy son, who, never in his life, showed a symptom of this disease or its dyscrasia.

In favor of the disease under consideration being gonorrhœa several arguments have already been advanced: The disease was contagious, it was acquired in sexual congress, it disappeared with time. That gonorrhœa may produce sterility is a well known fact, as it may be directly or indirectly the

cause of many female complaints affecting the lining membrane of the womb or of the Fallopian tubes. This goes without saying. It is not requisite that we should show how Sarah contracted the disease.

Perhaps from Abraham; perhaps from some one else; perhaps she acquired it *de novo*. Malicious natures are not likely to allow the last supposition to be the correct one, but it seems to us to be the most likely one.

We have said that gonorrhœa can produce sterility; might we not reverse the statement and say that sterility can produce gonorrhœa?

Modern authority will bear us out in replying in the affirmative. Sarah's sterility might have been due to some version or flexion of the womb, and a concomitant leucorrhœal discharge. This discharge may have occasionally produced a preputial or urethral irritation in her husband, though not necessarily so, for "a man may have connection with his mistress or his wife for years and not contract a discharge, although the female may be suffering from a purulent leucorrhœa, or even the discharge from a carcinomatous growth, as a tuberculous ulcer of the cervix."* As a natural corollary to this it follows, as has been shown in more than one case, that this same woman is thoroughly capable of imparting disease to any strange male with whom she may cohabit. What disease? Why, preputial and urethral disease—balano-posthitis, simple urethritis, gonorrhœa, herpes progeneralis, and perhaps chancroidal ulcers.

So it may be, as it seems likely, that the disease acquired by the king was not acquired by the husband, at least not in the same virulent form. Perhaps he himself was occasionally attacked with a genital herpes, or a balano-posthitis.

This idea is suggested to me by a peculiar incident in the life of Abraham, and while we approach the subject with the profoundest respect, we feel that its omission would leave out one link in the chain of the medical evidence at our disposal. Abraham was the institutor of the Jewish rite of circumcision. He did not invent the practice, for it was common among the Egyptian priests of his time, but he gave to it the peculiar sig-

* A Manual of Venereal Diseases, by Culver and Hayden.

nificance that it retains among his race to this day.* Alongside of the spiritual meaning of the practice was there not a practical hygienic meaning? Might it not have been suggested to him, while in Egypt, as an effective mode of cleanliness and a good preventive of genital disease? It was not only likely but most probable that he should have had some conversation on the subject with the priests (physicians) of Pharaoh, during their discussion of the plagues that had been introduced by his wife.

With the Egyptians and other nations of antiquity circumcision was performed chiefly as a sanitary precaution for the sake of cleanliness† and as a preventive of disease. Philo, the Jew, who belonged to the strict sect of the Pharisees, and who can not be supposed to have misinterpreted the meaning of this act as understood by the learned of his nation, is very emphatic in his statement that one of the objects of circumcision was the prevention of disease.‡

There is no doubt that the Egyptians used circumcision in the same way that we do at the present time, as a mode of treatment for disease, and we have the statement of Josephus that it was tried without success upon Apion, the Alexandrian,|| “for he was circumcised himself of necessity, on account of an ulcer in his privy member; and when he received no benefit by such circumcision, but his member became putrid, he died in great torment.”

Abraham was a man of great wisdom and observation. His spiritual contemplations did not in the least diminish his practical good sense as a man of the world. He probably spent a year or more in Egypt¶, after having witnessed the vices of the men in Sodom, a city which has never been rivaled on the face of the earth for lewd and bestial practices.

* It was also practised by the people. Dr. Birch, in a note to Wilkinson's “Manners and Customs of the Ancient Egyptians,” says: “It is evident from an inspection of the monuments that the Egyptians were circumcised, and this explains why the phalli of their uncircumcised enemies were brought into the camp to verify the number of the slain. The rite of circumcision is represented on the bas-relief of the temple of Chons, at Karnak, where a lad, supposed to be a son of Rameses II, and about ten or more years of age, is represented standing assisted by two matrons. The rite probably arose from some physical defect, as in Europe individuals require to be circumcised for reasons not religious. In ancient times necessity was sanctioned by a religious observance.”

Herodotus (Hist. II, 104) tells us that the Egyptians, the Colchians, the Ethiopians, and the Phœnicians were circumcised.

† Herodotus, II, 37.

‡ Philo (Opera ed Mangey, II, 210) reports, on the authority of tradition, four reasons for circumcision: cleanliness, the avoidance of carbuncle (chancroid?), the symbolizing of purity of heart, and the attainment of a numerous offspring.

|| Against Apion, II, 14

¶ Long enough for the women to discover that they had become sterile.

We therefore conclude that in instituting the right of circumcision it is not at all improbable that the personal experience of the patriarch, together with the information that he had collected in his travels, suggested to him the comparative immunity of circumcised men from disease. Accordingly, he himself, his son Ishmael and all the men of his household were circumcised on the same day. Ishmael was circumcised in his thirteenth year, just before the evolution of puberty, suggesting the idea that the act was performed with a view to preventing those diseases which as a rule do not begin before puberty. We may conclude that after the circumcision of Ishmael his father had occasion to put further thought upon the subject, seeing in the operation a hygienic as well as a preventive measure, and therefore, when his son Isaac was born, Abraham circumcised him on the eighth day after birth.

It is interesting to recall that the children of Ishmael who received the rite from Abraham, without its special spiritual privileges, continue to this day to circumcise their sons at the significant age of puberty.

Proceedings of Societies.

SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

Fifth Annual Meeting held in Louisville, Ky., November 15, 16 and 17, 1892. J. McFadden Gaston, M. D., president; W. E. B. Davis, M. D., secretary.

November 15—First Day—Morning Session.

The association met in the council chamber of the City Hall, and was called to order at 9:30 A. M. by the president, Dr. J. McFadden Gaston, of Atlanta, Ga.

An address of welcome was delivered by Dr. L. S. McMurtry, of Louisville, chairman of the Committee of Arrangements, the response to which was made by the president.

The first paper read was by Dr. Bedford Brown, of Alexandria, Va., entitled "Personal Recollections of the late Dr. Benjamin W. Dudley, of Lexington, Kentucky, and his Surgical Work."

The speaker paid an eloquent tribute to Dr. Dudley, and characterized him as the greatest living lithotomist that this country had ever produced and the most successful in the history of the world. The speaker's close relationship to Dr. Dudley as private pupil and assistant for two years enabled him to present a clear and faithful sketch of his character and surgical work.

EXPERIENCES IN PELVIC SURGERY.

This was the title of a paper read by Dr. A. V. L. Brokaw, of St. Louis, Mo. Of all the surgical problems difficult to solve, it may be truthfully said that those met with in the pelvis are the most trying. The speaker knew of no surgical work which will compare with the experiences found in the pelvis; a diversity of conditions, complications and unexpected happenings are ever presenting. In a series of many operations but few will be alike in every particular. As his experience became larger he was free to confess his inability to correctly diagnose the character of abdominal and pelvic troubles. He had diagnosed pus tubes and found extra-uterine pregnancy; diagnosed extra-uterine pregnancy and found pus; diagnosed ovarian lesions and found the trouble located in the tubes and *vice versa*. When well defined pelvic lesions exist, nothing short of radical measures succeed. The one condition above all others where exploratory incision should be adopted was in cases of suspected extra-uterine pregnancy. It was correct and good surgery to open the abdomen, and not wait for all the classical signs to appear. The symptoms of extra-uterine pregnancy were so frequently obscure and unreliable that he was firmly convinced a radical position should be taken. A case was cited in point.

Dr. William Warren Potter, of Buffalo, desired to endorse that portion of the paper pertaining to an early exploratory incision in cases of suspected extra-uterine pregnancy. As regards the use of the sound, he had brought an indictment against it some six or eight years ago, consequently he would not expatiate upon it at this time.

Dr. Joseph Taber Johnson, of Washington, said that as soon as the surgeon diagnosed something in the abdominal cavity that ought not to be there, anatomically or physiologically, and was histologically wrong, it should be removed. An exploratory operation was justifiable in cases of suspected extra-uterine pregnancy, and the surgeon should base his further procedures upon what he finds after making the exploration.

Dr. W. E. B. Davis, of Birmingham, Ala., thought the pendulum relative to surgical interference had swung a little

too far. He believed that a great many of the so-called "tinkerers," who succeeded in relieving their patients, did not accomplish it so much by the local treatment they used as by having patients under their care, keeping the bowels open, giving constitutional treatment, seeing them regularly, etc. While, by so doing, they might not be cured, they were frequently greatly benefited. Regarding the diagnosis, surgeons who were opening the abdomen constantly would rarely give a positive diagnosis in the case. Dr. Davis cited the case of a woman who had an acute attack of peritonitis, and the history was the same as from pelvic abscess.

Dr. Brokaw, in closing the discussion, said that in every case of suspected extra-uterine pregnancy it was good surgery to make an exploratory incision and operate before rupture took place.

Dr. Cornelius Kollock, of Cheraw, S. C., read a paper on

CRANIOTOMY UPON THE LIVING FŒTUS IS NOT JUSTIFIABLE.

He said this operation implied the death of the fœtus, and a frightful mutilation of its body, often accompanied by serious lacerations of the vagina and adjacent tissues of the mother. Recent advances in obstetrics, gynecology and abdominal surgery contribute largely to a demonstration of the fact that a timely resort to Cæsarean section in pelvic obstruction is the great factor to success. In Germany, out of 149 cases of contracted pelvis, 109 mothers and 136 children were saved. If craniotomy had been done in those cases 149 children would have been destroyed, and probably fifty women—perhaps more, making a sacrifice of at least 199 lives. In many of these cases exhaustion had supervened, and septic influences had already been excited. This, added to a tardy disposition to union by first intention, caused by contusion of the parts involved in the uterine incision, lessened materially the women's chances for recovery. Zweifel was successful in 29 cases out of 30; Schauta did Cæsarean section 15 times without a single death. Recently in 18 operations done in Louisiana 14 were successful. Of 8 in Ohio 6 were successful. Dr. Price has done Cæsarean section a number of times successfully. Dr. Kollock is firmly convinced that 85 or 90 per cent. of the cases of obstruction of the pelvis, forbidding the delivery of the fœtus in the natural way, might be saved by a timely resort to Cæsarean section.

Dr. W. D. Haggard, of Nashville, emphasized the position taken by Dr. Kollock. He believes that when the profession fully realize the immense difference in the number of lives saved by Cæsarean section over craniotomy, there will be no doubt as to its preference to the latter operation.

Dr. Hunter McGuire, of Richmond, favored Cæsarean section. Some time ago he saw the report of a case by Dr. Thomas, of New York, where, in doing the Cæsarean section, he proposed to take the uterus out of the cavity, and then open it. He thought that this added very much to the danger of the operation, necessitating a larger opening, exposing the cavity of the abdomen a long time to the atmosphere, etc. He does not favor this procedure.

Dr. L. S. McMurtry, of Louisville, said that a few years ago it would have been impossible for one to have presented the views that Dr. Kollock had without meeting with violent opposition. Cæsarean section was then regarded as an extremely heroic operation, and until recent years the mortality therefrom was very great; but since it has been carried to the present degree of perfection by Saenger and others it has strengthened the opinions of abdominal surgeons, who now consider it preferable to craniotomy. Within the last two months symphysiotomy had been brought before the profession and practised as an alternative in certain cases for Cæsarean section. What the future of the former operation is to be we were not prepared to say.

Dr. Arch Dixon, of Henderson, Ky., advised Cæsarean section in a case in which he was called in consultation, but the family physician insisted upon his doing craniotomy, which was done, and while every precaution was taken with regard to rendering aseptic the field of operation, the woman developed pelvic peritonitis and died within four days. He believed a Porro operation would have saved the life of the woman and perhaps that of the child.

Dr. W. D. Haggard, of Nashville, read a paper entitled

A CASE OF EXTENSIVE HEMATOCELE RESULTING FROM TUBAL PREGNANCY RUPTURING INTO THE BROAD LIGAMENT.

Although the fœtus was not found, that it was a case of tubal pregnancy with rupture into the broad ligament is clearly established by the clinical history and post-mortem appearances, summarized as follows: (1) Patient confessed having had intra-pelvic trouble previously (presumably gonorrhœa), for which she was treated locally. (2) At the time of the accident, caused by jumping from a wagon, her menses were past due. As to how long, her statements were misleading. (3) There was a fitful yet persistent bloody flow from the uterus during her entire illness. (4) Paroxysmal, colicky pains in lower abdominal and pelvic regions of frequent occurrence. (5) Existence of a tumor above the pubes, which she probably mistook for a gravid uterus. (6) Persistent refusal

to submit to a digital examination, probably fearing the detection of her pregnant state.

Post-Mortem Appearance.—(a) Enlarged and softened condition of the uterus with a patulous os, showing escape of sero-sanguinolent, stringy fluid. (b) Enlargement of the left tube with a well-defined cavity from which the fruit sac escaped. (c) Existence of a deciduous membrane, as revealed by the microscope. (d) Discoloration of the rectum, produced by blood dissecting around it, producing constriction and partial death.

Dr. S. M. Hogan, of Union Springs, Ala., reported a case of

FIBROID TUMOR OF THE UTERUS, PREGNANCY, RUPTURE ABOUT THE FOURTH MONTH, OPERATION, SPECIMEN.

The woman, colored, was 28 years of age, and from the symptoms and history of the case he was satisfied there was a rupture and the probabilities were that it was about the fourth month of gestation. He was also of the opinion that the rupture did not immediately destroy the fœtus, that it continued to grow in its abnormal position. The speaker felt sure that if he had operated on the case immediately after rupture, the patient's life would have been saved. In all cases of rupture he would advise Porro's operation to be done immediately; that in all cases where the tumor is large or multiple, intramural or sub-peritoneal, with a sacciform dilatation of the posterior segment of the uterus, and the os above the pubic bone, or inaccessible, the same operation should be done. In all cases where the tumor is in front of the child, or blocking the passage, it should be done, provided the pregnancy has advanced to the full time, or there should be a hæmorrhage, or rupture of the membranes, indicating that an abortion or miscarriage is imminent.

First Day—Afternoon Session.

Dr. Geo. A. Baxter, of Chattanooga, Tenn., read a paper entitled

A NEW OPERATION FOR THE RADICAL CURE OF INGUINAL HERNIA.

Dr. Baxter presented a radically different operation in principle from any yet given. It consists in a prolongation of the incision, after the ordinary management of the sac and after ligating, through the internal ring into a more or less extensive laparotomy as the exigencies of the case demand; lifting the neck of the sac into the abdominal opening above the ring and its fixation there by a deep saturating, cutting off the sac

close above the peritoneum and its closure by buried suture, and a final closure of the abdominal opening by this and a more superficial set of sutures which pass across above the closed sac and peritoneum and underneath the deep fasciæ which are intended to approximate the homologous tissues of the abdominal wall. The ring is closed with crucial sutures dipping over cord and traversing the tissues, and the seminal canal closed with deep suturing alone.

Points of originality claimed. A line of incision suitable for any inguinal hernia, and by the fixation of the sac above the peritoneum a deflection of all abdominal expulsive force from the ring and canal, and the thickened lining of the internal ring, and the method of inclosure of abdominal incision.

Advantages claimed. Quick cure, with avoidance of necessity of truss; deflection of expulsive force from internal opening and canal to abdominal parietes. Advantage in being able to approach constriction either from without or within. Avoidance of necessity for traction on sac or contents. Ample room for treatment in diseased conditions of sac or contents, including gut operation if necessary.

Dr. Henry O. Marcy, of Boston, followed with a paper on

THE CURE OF INGUINAL HERNIA IN THE MALE.

He said until recently the cure of inguinal hernia in the male had been considered at the best accidental, and, when apparently effected, generally doubtful and the hernia liable to return. The great majority of surgeons looked upon an attempt at cure as ill-advised, and believed operative measures should not be undertaken except in cases of strangulation. Dr. Marcy thought there was abundant reason for such conclusion, when judged from the earlier history of the surgical procedures as attempted for cure. The essential surgical considerations for the cure of hernia were as follows:

First—Strict aseptic conditions. These pertain alike to all modern surgical procedures.

Second—A free dissection. This is necessary in order to lay bare the internal ring, to permit of the enucleation of the peritoneal sac, and the separation and elevation of the cord out of the wound. The external epigastric artery often courses in the line of the incision. It is not seldom that the size of this vessel is such that the operator fears he has wounded the larger vessel.

Third—The disposition of the sac. The separation of the sac to its very base before removal is to be recommended

as the rule. There are times, however, when it is not easy to free the peritoneal pouch, owing to adhesions to the surrounding tissues, and in large old irreducible hernias a more or less intimate fusion of the contents to the inner wall of the sac.

It is generally better to open the sac before ligating or sawing through its neck, since by so doing the condition at the internal ring is assured, and by such knowledge the operator is often profited even if the sac is completely empty; not seldom the omentum is adherent at the internal ring, and even a constricted loop of intestine may escape observation when it is attempted to return the sac unopened. Dr. Marcy closed his paper by saying that between three and four millions of people living in the United States were subject to hernia; and if the demonstration is complete that the risk of life is less than 1 per cent. from the operative procedures for cure, and that scarcely more than 10 per cent. are subject to relapses, and these almost invariably in a state improved by the operation, the plea is a very strong one to consider favorably the advisability of operation in a very large majority of all the sufferers from hernia.

Dr. W. H. Wathen, of Louisville, read a paper entitled

THE TREATMENT OF UMBILICAL AND VENTRAL HERNIA.

He said the importance of studying carefully the best methods of treating hernia is now especially emphasized because of the increased frequency of the disease following laparotomy, and especially because the modern methods of surgery make the operation far less dangerous than it formerly was. The operation for radical cure of hernia in the practice of the best surgeons, except in extreme cases, is practically devoid of danger, and the result may be made permanent. Modern antiseptic and aseptic precautions have practically excluded the danger which formerly arose from infective peritonitis. The author said there are many cases of ventral hernia that could have been prevented had the proper treatment been carried out in the closure of the abdominal wound. In order that there may be no hernia following laparotomy it is necessary to get perfect union by adhesions of all the layers of tissue forming the abdominal wall—the peritoneum, muscles, the deep and superficial fascia, and the skin, but especially must we get union of the layers of fascia, for unless this be done the other layers will gradually separate, and hernia will follow. This can not be done unless we succeed in bringing the cut edges of the fascia in even and perfect apposition long enough for strong union to occur.

Second Day—Morning Session.

Dr. W. O. Roberts, of Louisville, read a paper on

THE TREATMENT OF UNUNITED FRACTURES BY RESECTION.

He said the treatment of ununited fractures by resection was more than a hundred years old, White, of Manchester, having done the first operation in 1760. In consequence of the great mortality attending the operation it was abandoned until revived by Sir Benjamin Brodie. In 1805, Horeau, after having divided the fragments obliquely, fastened them together by tying a metallic wire around them. Rogers, of New York, in 1838, passed the wire through holes drilled in the wall of the fragment and then twisted it. Since then other surgeons have used sutures of various materials in the same way; some of them leaving the sutures in permanently, while others removed them after union of the fragment had occurred. Some, instead of drilling the bone, passed the sutures simply through the periosteum. Screws, nails, ivory pegs and clamps have been used for the same purpose. In the long bones, when coaptation of the fragments can be secured, Dr. Roberts feels satisfied that resection and a fixed dressing will be followed by just as good results as when sutures or other contrivances for fastening the ends of the fragments together are used.

SYMPTOMS OF FRACTURE, THEIR IMPORTANCE AND SIGNIFICANCE.

Dr. W. C. Dugan, of Louisville, read a paper on this subject.

Dr. Bedford Brown, of Alexandria, Va., related the case of a boy who sustained a compound comminuted fracture of the skull in 1880, yet he was perfectly conscious and had no symptoms of compression of the brain. The spiculæ of bone were removed, and recovery followed.

Dr. J. H. Letcher, of Henderson, Ky., advised against the too hasty resort to the use of trephine and chisel in injuries of the skull.

Dr. C. Kollock, of Cheraw, S. C., had trephined in two cases, with successful results.

Dr. J. H. McIntyre, of St. Louis, reported a case of traumatic insanity in a railroad employé in which he trephined with success. The fracture was an extensive one, and occurred in the upper Rolandic region. He reported several other interesting cases.

Dr. William Warren Potter, of Buffalo, called attention to fracture of the internal table of the skull without fracture of the external; hence the great liability to error in diagnosis.

Dr. Howard A. Kelly, of Baltimore, related the case of a man who fell and was brought to the Presbyterian Hospital in a comatose state. Careful examination revealed the fact that the man had diabetic cataract with fracture at the base of the skull.

Dr. William T. Briggs, of Nashville, had trephined in fifty cases of epilepsy. Four-fifths of the cases operated on were relieved temporarily but not permanently.

Dr. T. A. Reamy, of Cincinnati, mentioned the case of a man who had fallen from the second story of a court-house, sustaining a fracture of the skull, but had never had epilepsy or any bad symptom following the injury. He thought this case would be some comfort to the country practitioner who did not enlarge the scalp wound in all cases.

The papers were further discussed by Drs. Vance, Lydston, Nicolson, Greenly and Baxter, all of them favoring radical measures in the treatment of injuries of the skull.

Dr. L. S. McMurtry, of Louisville, read a paper entitled ovarian cystoma with twisted pedicle and peritonitis; ovariectomy in second week of typhoid fever—recovery.

Dr. H. Horace Grant, of Louisville, contributed a paper on

INTESTINAL ANASTOMOSIS BY A NEW DEVICE.

For more than a year the speaker has been endeavoring to perfect some instrument to simplify direct suture, but it has been so difficult to get just what he wanted that time has not been allowed since the completion of the instrument to test it fully. It is to be used only after resections. The two blades of the clamp are made long enough to allow of introduction full five inches. After the gut is exposed, a strand of iodoform gauze is passed through the mesentery and constricts the intestine fully six inches from each point of intended resection. The mesentery is tied off over the portion to be resected with fine silk, in two-inch loops, cut close and dropped in the usual way. When the resected portion is removed the gut ends may be washed out if desired. While the two ends of the divided intestine are held parallel, one blade is entered in each, allowing at least one and one-half inches of gut beyond the proposed anastomotic opening to permit of invagination of the ends.

The clamp is tightened, and the two surfaces thus firmly held are rapidly stitched together by a continuous overhand Lembert suture of fine silk. Two rows of parallel sutures as suggested by Abbé may be used if desired, though it has seemed that one is enough according to the author's experiments. The work can be done far more rapidly and accu-

rately than without the clamp. When the suturing is finished the clamp is tightened if need be, and a long-bladed dressing forceps passed into the bowel and the oval plug removed or pushed in. The scissors action of the blades, together with the ten or fifteen minutes pressure, prevents any hæmorrhage. The clamp is now withdrawn and the ends invaginated in the usual way.

Dr. V. A. L. Brokaw, of St. Louis, thought the instrument exhibited by Dr. Grant a good one, and said that anything which materially assists the surgeon in making intestinal anastomotic operations rapidly was of great value; that time was a most important element. The use of rings, plates and mats in the past was bad. He believes we can suture far more rapidly with Dr. Grant's instrument than with any other device he has thus far seen.

Dr. W. E. B. Davis, of Birmingham, Ala., believed a large number of operators had abolished mechanical devices in doing intestinal anastomosis. His brother (Dr. John D. S. Davis) had devised a catgut plate and mat, but now prefers not to use the plate. In the case of resection of the bowel he thought the device of Dr. Grant was an ingenious one, inasmuch as it would facilitate the work of the surgeon and enable him to do an operation very quickly. He had conducted a series of experiments in an effort to do away with mechanical devices by which surgeons might use the end to end operation by splitting up the bowel. While the operation was successful in some cases, the strain on the circulation was too great, and he now condemns the operation.

Dr. G. Frank Lydston, of Chicago, directed attention to Dr. J. B. Murphy's anastomosis button, a recent device, by which, he says, cholecysto-enterostomies can be done in from eight to twelve minutes.

Second Day—Afternoon Session.

The association was called to order at 2:30 P. M., with the first vice president, Dr. C. Kollock, in the chair.

The president delivered his annual address. He took for his subject "Compatibility of Conservative and Aggressive Surgery." He said the circumspect philosophy of former days taught us what man has done, man may do. But the developments of more recent times say, whatever is practicable may be undertaken, without regard to precedents; conservative and aggressive processes are combined in progressive surgery. Conservatism in the use of all the appliances of surgery is not inconsistent with the application of the most energetic means of relief in structural disorders. A misapprehension exists

with many of our professions as to the true sphere of progressive surgery, and it was the purpose of President Gaston on this occasion to make a distinction between rashness in the employment of operative measures and boldness in the use of surgical means of relief when clearly indicated. Real advances in surgical practice have not been the result of cutting and slashing without due consideration, but have accompanied the painstaking investigation of the conditions requiring the knife, and caution in the performance of operations.

As a preliminary to any surgical procedure of a radical nature, correct diagnosis is essential, but to accomplish a proper understanding of a deep-seated disorder it is often requisite to make an exploratory operation of greater or less magnitude. The information based upon such an exploratory measure serves as a guide to any further surgical procedure. Dr. Gaston said that ignorance and inexperience often lead to sad results in meddlesome surgery, when limbs are sacrificed or organs mutilated to gratify the desire to figure as a bold operator on the part of a would-be surgeon. In such cases no high-toned member of the profession should shield the culprit from the charge of malpractice or from the assessment of damages by a court of justice.

Dr. Ap Morgan Vance, of Louisville, read a paper entitled

A PLEA FOR MORE RAPID SURGICAL WORK,

In which he said a great number of surgeons pay little attention to the time consumed in an operation, or to the nicety of manipulation and dexterous use of instruments that our forefathers prided themselves on. He had seen on numerous occasions the work of our most distinguished surgeons, and had seen deaths occur from prolonged anæsthesia and too much time consumed in operation which would not have taken place if much unnecessary time had not been wasted. The habit of starting the anæsthetic before all preparations were completed was very reprehensible.

The paper was discussed by Drs. Arch Dixon, Rufus B. Hall, Geo. A. Baxter and Edwin Ricketts, all endorsing the position taken by the essayist.

Dr. Charles A. L. Reed, of Cincinnati, contributed a paper entitled

SURGERY OF THE URETERS, WITH A REPORT OF CASES.

He said that surgery of the ureter is one of the developmental subjects of abdominal surgery. These out-of-the-way conduits exercising functions that are vital in character were liable

to diseased conditions which baffle the resources of the diagnostician, and tax the ingenuity of the operator. For purposes of diagnosis the physical means at our disposal may be briefly summarized as follows: (1) Exploration of the lower end of the ureter by digital examination (*a*) through the vagina (*b*) rectum, and (*c*) the bladder; (2) exploration of the lower end of the ureters by the sound passed through the urethra and bladder into the ureters; (3) exploration of the central portion of the ureters by abdominal lumbar palpation—an expedient of practical value only in cases of extreme urethral distention occurring in very thin subjects; (4) exploration of the upper end of the ureters by exploratory nephrotomy. Each of these several expedients might be amplified, but it would be uncalled for in the presence of such distinguished members.

Dr. Reed said that since catheterization of the ureters has been popularized in this country, chiefly through Kelly, and since the technique of the procedure has become understood by those who have studied it, the diagnosis of disease within and surrounding these tubes is vastly more common. The digital exploration through the urethra and bladder is an easy expedient so far as the surgeon is concerned, and often leads to the elucidation of important pathological facts, but the speaker is forced to believe that it is not without danger to the patient. He has been forced into this belief by one case of incontinence lasting for nearly a year, and by two cases of weakened power of retention, one of which is now of quite two years' standing. Dr. Reed said that abdominal section for diagnosis of ureteral conditions, notably in cases of suspected calculus, is entirely justifiable. He then reported a case of peri-ureteritis; kolpo-cysto-ureterotomy, with recovery. The second case was one of cicatricial stricture of an excised ureter; hydronephrosis, nephrectomy, remaining urethral disease.

Dr. William Warren Potter, of Buffalo, read a paper entitled

SPECIALISM IN MEDICINE, PARTICULARLY AS RELATED TO SURGERY AND GYNECOLOGY.

He summarized his argument thus:

1. There is essential need for specialists. Divisions of labor in every field are demanded, and nowhere more than in medicine.

2. Specialists being a necessity, they must equip themselves by years of study and devote themselves to a still greater number of years of general practice before they are justified in offering themselves as specialists.

3. They must conduct themselves in such a way as to

merit the respect of the general practitioner and to invite his co-operation in their work.

4. The unwritten ethics of specialism demand that there shall be reciprocal relationship maintained, not only among specialists themselves, but also between specialists and general practitioners.

5. The opportunities for perfection in special lines of medical study are so great, and medical literature in both journalistic and text-book form is so rich, that an awful responsibility is entailed.

6. The schools ought to discourage any and all students who give promise of entering upon the practice of a specialty as soon as the college doors are passed, and before the swaddling clothes of the professional tyro are slipped.

Dr. R. M. Cunningham, of Birmingham, Ala., followed with a paper entitled

THE GENERAL PRACTITIONER AS A GYNECOLOGIST.

He said the general practitioner should not undertake work that can be better and more safely done by the specialist, provided one is obtainable. He should be willing to do and attempt the most radical and dangerous operations when necessary to save life, provided a specialist, or one better prepared to do the work, can not be obtained. In cases not necessarily dangerous, or in which life does not become more or less a burden, but in which a cure can be effected only by a radical procedure, but which may be materially benefited or symptomatically relieved by milder methods, he should adopt the latter and not the former. In many cases the field is clearly his own, belongs to him, and he should be prepared and competent to treat them with safety and success.

Dr. W. F. Westmoreland, of Atlanta, read a paper on

SPECIALISM IN MEDICINE.

He said there were two kinds of specialists, the one with his preconceived ideas, which become warped, who always suffers from astigmatism, etc., who is a graduate of his kind. The other kind was the man who has worked his way by his generally acknowledged ability in any particular line.

Dr. Howard A. Kelly, of Baltimore, read a paper entitled

A PRELIMINARY REPORT OF THE MORPHOLOGY OF OVARIAN AND MYOMATOUS TUMORS.

The speaker said the form of abdomen characteristic of large ovarian cysts is a globular or ovoid distention of a

part or the whole of the abdominal wall, pushing out the infra-umbilical portion much more than the supra-umbilical, at least, so long as the tumor occupies the lower half or two-thirds of the abdomen. This enlargement is uniform in parovarian cysts and polycystic tumors exhibiting but few bosses, due to the fact that the latter are composed of one or two large cysts associated with a mass of smaller ones, and the large cyst is best accommodated in the median line in the distended concave anterior abdominal wall, while the smaller ones at the side or back consequently do not show. Prominent exceptions to the general rule just enunciated that pelvic tumors distend most markedly the inferior abdominal zone are the notable stretching of the upper abdomen in very fat women with large ovarian tumors, and the like distention in rachitic dwarfs in advanced pregnancy. Nodular myomata on the other hand stand out in marked contrast to the smooth outlines of cystic tumors in giving to the lower abdomen a lumpy bossed appearance, thus exhibiting through muscles and skin a softened exaggeration of their irregular outlines. This peculiarity still remains prominent, although softened, after these tumors have undergone fibro-cystic degeneration. Cystic tumors filling the pelvis and part of the abdomen are but rarely found to originate in some upper abdominal tumor. The speaker presented for demonstration a photograph of an enormous kidney, containing over a gallon of pus, extending from the pelvis floor up through the abdomen and pushing up the left ribs.

Third Day—Morning Session.

Dr. A. M. Cartledge, of Louisville, read a paper entitled

THE PRESENT STATUS OF DRAINAGE IN SURGERY.

He presented the following summary:

1. The principle of artificial drainage in surgery, while very ancient, was imperfectly understood, and was oftentimes as much a factor for evil as for good.
2. Though our knowledge of the principles which govern a healthy regeneration of wounded structures has greatly advanced, and our progress in wound therapeutics kept pace, we fail to appreciate how artificial drainage can be altogether dispensed with in surgical practice.
3. To lessen the use of artificial drainage, it is necessary to thoroughly apply the principles of asepsis and antisepsis, combined with buried sutures, fixation and alimentary or systemic drainage.
4. Where from any reason the production of a serum can

not be controlled, its removal by drainage is a safer surgical measure than any attempt at sterilization *in situ*.

5. The time required for primary drainage is from twenty-four to sixty hours; to wait longer is to encourage trouble; to remove sooner than twenty-four hours is taking risks not warranted in the premises.

6. Capillary is to be preferred to tubular drainage in wounds other than those of the large cavities. For this purpose absorbable material should be selected, catgut being the best.

7. Where it is desirable to combine hemostasis and drainage in the same measure, the strips of iodoform gauze, as recommended by Mikulicz, fulfill a most useful purpose.

8. Where natural drainage can be utilized without producing unsightly cicatrices, artificial drainage should be dispensed with; when feasible, combine the two.

9. Wounds involving the brain and cord had best be drained to avoid mechanical violence to the function of delicate structures by retained serum.

10. Necessity for artificial drainage will most often arise in wounds invading the large cavities; here inflexible tubular drains (glass) best meet the requirements, aided or not by materials acting by capillarity.

11. The method of secondary suture after primary wound secretion is over, advised by Kocher, seems to possess no advantage over drains that have to be removed, and certainly is not to be compared in convenience, comfort, etc., to the patient, to absorbable capillary drains.

Dr. William H. Myers, of Fort Wayne, Ind., read a paper on

THE TREATMENT OF TUBERCULAR PERITONITIS.

He said when we have arrived at the conclusion that peritonitis is present and have discovered the cause, the blow must be struck simultaneously with the onset. No delay can safely be tolerated, the only hope of rescue being the sudden arrest of the disease. By the time that the normal outlines of the abdomen are obscured by tympanitic distention, respiration quickened and shallow, the pulse rapid and wiry, the supreme moment for precise diagnosis is passed. Abdominal section for tubercular peritonitis was the most recent triumph of surgery. Dr. Myers had treated three cases of tubercular peritonitis by abdominal section, washing out the abdominal cavity and drainage, with complete recovery.

Dr. G. Frank Lydston, of Chicago, followed with a paper entitled

BACTERIOLOGICAL RESEARCH IN ITS RELATION TO THE SURGERY OF THE GENITO-URINARY ORGANS.

The author said that in his opinion modern bacteriological and pathological research has nowhere been more productive of scientific and practical progress than in the special field of genito-urinary surgery. He would not attempt to decide the question as to whether, under certain circumstances, the microbial organisms which are constantly to be found in the secretions of the genito-urinary tract are causal factors in pathogenesis of various forms; or, on the other hand, to decide the precise relation of hetero-genetic organisms to the same morbid processes. The relation between what may be termed the normal germ and germs of non-pathogenic properties must certainly be left to the practical microbiologist. We are warranted, however, in drawing certain inferences and making certain practical deductions from what we know of the evolutionary laws of progression, differentiation and adaptation to environment. Many of the diverse forms of disease of microbial origin were doubtless embraced under the omnibus term of urinary infection. The present state of our knowledge does not admit of arbitrary differentiation between them. It is sufficient to say that many of the forms of organic and functional change affecting the genito-urinary tract are of microbial origin. These processes range in severity from a general infection with effusion, and perhaps suppuration, in joint cavities, to so simple a local lesion as a chronic prostatic irritation. The author quoted the researches of such modern authors as Reginald Harrison, Halle, Rovsing, Krogus, Buma, Albarran, and Guyon.

Dr. Joseph Taber Johnson, of Washington, D. C., read a paper entitled

OVARIOTOMY IN OLD WOMEN,

in which he reported three cases, and felt quite sure that prolonged anæsthesia and manipulation within the peritoneal cavity would have proved fatal. The first patient was 67 years of age, and the tumor removed weighed fifty-two pounds. The second case was one of multilocular ovarian tumor. The patient was 63 years of age, and the tumor removed weighed sixty-four pounds. On October 10 of this year, he removed an ovarian tumor weighing fifty-six pounds from a lady who was 67 years old, but who looked to be 100. Improved methods, quicker operations, antiseptic technique and provisions against shock, show thirty-three recent cases between the ages of 67 and 82, with only two deaths, against twenty-four cases done twenty years ago between the ages of 60 and 67, with a record of six deaths. These figures demonstrate, in addition to im-

proved technique, the surprising fact that old age is no contra-indication against ovariectomy.

Dr. Bedford Brown, of Alexandria, Va., read a paper entitled

THE SIMPLE, SEPTIC, TRAUMATIC AND SPECIFIC FORMS OF CERVICITIS AND THEIR TREATMENT.

Simple cervicitis arises alone from simple causes. It never originates from infection of any kind. It could exist for an indefinite period without infecting surrounding structures. For many years the author in the treatment of this affection has addressed his remedies to the interior of the cervical canal alone, whether he used nitrate of silver, sulphate of copper, carbolic acid, or iodine. Septic cervicitis arises always from septic infection for the pelvic structures connected by lymphatic communication. Contact with the os of portions of putrescent placenta, membranes, coagula or septic discharges from diseased uteri were the common causes. Antiseptic measures alone could counteract septic infection and inflammation, whether in the form of septicæmic fever or local inflammatory action. All other agencies were simply palliative or adjuvant in character. Traumatic cervicitis was simply inflammation and congestion of the cervix from wounds inflicted on that body either during labor, abortion, or from the use of dilating instruments. The author treats this form of cervicitis by means of a solution of nitrate of silver, varying in strength from a scruple to half a drachm, applied in the canal and over the entire cervix. He finds that most of his cases of open and all cases of concealed wounds heal by this method. Specific cervicitis may arise either from gonorrhœal or syphilitic infection. In the early stages he resorts to douches containing peroxide of hydrogen in the proportion of one part to three-fourths of boiled water, and also permanganate of potash, one grain to the ounce of water.

Dr. James Evans, of Florence, S. C., contributed a paper on

SHOCK.

The speaker said in the severe injuries inflicted on the body by accident, and in the major operations of surgery, not the least element of danger to life is the condition known as shock which rapidly supervenes. The degree of shock is not determined solely by the extent and gravity of the physical injury. Certain idiosyncrasies of constitution, the character of the force which inflicted the injury, and the circumstances under which it occurred, are potent factors in its determination. Individuals of a highly wrought and exquisitely nervous

organization bear pain with far less fortitude and are more susceptible to shock than those of dull and obtuse intellects and blunted sensibilities. The author reported a case in point. In laying the foundation of a bridge across the Pee Dee river in South Carolina, an immense block of granite weighing over a ton was being lowered into a pit forty-four feet in depth, at the bottom of which was a man who was to direct when it was in proper position. When this huge block of stone was suspended over the pit the cable holding it began to slip, and the man below was warned to crouch in a corner, as it would inevitably fall. The rock did fall, and the man in the pit miraculously escaped without injury, but he was taken out in a perfectly lifeless condition, and was exceedingly ill for more than a week.

A MANIPULATIVE MISTAKE AND ITS CONSEQUENCES.

This paper was read by Dr. George Ross, of Richmond, Va. The author related the case of a woman who had suffered from unremitting, agonizing tenesmus, the result of a mass which she carried for seven years in her bladder, and which proved to be, on inspection, a pledget of absorbent cotton once saturated with iodoform, in shape of a truncated cone, and thinly incrustated with phosphate of lime. The patient believed it was introduced by her first physician, who, when attempting to apply an intra-uterine dressing, mistook the urethra for the cervical canal.

Dr. William Perrin Nicholson, of Atlanta, made some remarks on

HARELIP OPERATIONS,

in which he advocated the use of a simple suture instead of a pin, and also recommended paring the edges.

Dr. Edwin Ricketts, of Cincinnati, read a short paper entitled

CHOLECYSTOTOMY, WITH THE REPORT OF A CASE.

He had operated thirteen times for obstruction of the gall ducts. The patient, a lady, 34 years of age, married, consulted him last June. She had never suffered markedly from jaundice, nor from acute attacks of hepatic colic, nor marked distention over the region of the gall bladder; abdominal wall at least three inches in thickness; some general tenderness of the liver elicited by percussion. The patient had the characteristic putty-colored stools, and was losing flesh rapidly. The author advocated allowing a glass drainage tube to remain in until the

common duct was opened, and then, if necessary, to make an anastomosis between the gall bladder and the duodenum.

The following officers were elected:

President—Dr. Bedford Brown, of Alexandria, Va.

First Vice President—Dr. Joseph Price, of Philadelphia.

Second Vice President—Dr. George A. Baxter, of Chattanooga.

Secretary—Dr. W. E. B. Davis, of Birmingham, Ala.

Treasurer—Dr. Hardin P. Cochrane, of Birmingham.

Place of meeting, New Orleans, La. Time, second Tuesday in November, 1893. Chairman of Committee of Arrangements—Dr. Albert Miles.

THE CLINICAL SOCIETY OF MARYLAND.

The 271st regular meeting was called to order by the president, Dr. William E. Moseley, at Baltimore, November, 18, 1892.

Drs. T. C. Gilchrist, Theodore Cooke, Jr., and James McShane were elected to membership.

Dr. S. A. Keene read a paper on

PERSONAL EXPERIENCE IN THE CHOLERA EPIDEMIC OF 1866.

Dr. Keene said in part: About the latter part of September, 1866, cholera broke out among some oyster men while dredging in the lower waters of the Chesapeake Bay. The origin was assigned to a vessel hailing from Philadelphia, where the disease had been raging for two or three months. I saw my first patient one midnight. He had been vomiting and purging not more than an hour or two. I believed it to be an ordinary attack of cholera morbus, as there was not then the slightest suspicion of cholera anywhere nearer than Philadelphia. I prescribed opium and bismuth, to be followed by a purgative and probably mustard poultices to the abdomen. Next morning while on my way to see this patient a messenger met me with a call in another direction. I followed the messenger, and when I reached the patient I found him affected similarly to the one I had seen the night before, and from him I learned for the first time that there was a disease prevailing among the oyster men dredging at James' Island from which they were "dying like sheep," and that he and Slocum, my first patient, becoming alarmed, had left their boats the evening before to come home, about thirty-five miles distant. On the way Slocum complained of feeling badly, but when they parted about 10 o'clock he had not vomited. My second patient had

slept well during the night, and had been only aroused early that morning by a desire to evacuate the bowels. I prescribed the same remedies as for my first patient.

I hurried to my first patient and found him dying. He died two hours later, within twelve hours from the time he and his companion separated the night before and within nine hours from my first visit. I returned immediately to my second patient and found that vomiting had come on during my absence and the purging had also increased. He seemed quite prostrate and very anxious. Really, I did not know what to do. With a very limited experience, for I had only graduated eighteen months before, all alone in a country place, having just left a corpse and now standing before a most probably prospective one, you may well imagine my feelings. If I had never before appreciated the responsibilities of my profession, it is needless to say that now I realized them all. Opening my little armamentarium and thinking all the while what I should give, I could conjure nothing nor select anything more than what I had already given him. During my perplexity the patient's old mother suggested that injections of red oak bark tea might be of service. I eagerly accepted the suggestion. The old lady knew how to make and give the injection, so I left to consult my books, promising to return soon. When I reached home there was another call, which I found to be a similar case. Within four or five days I received seventeen calls to cholera patients, all of them oyster dredgers and coming from the affected boats. I gathered up my journals and read them as well as I could on my routes while my boy drove.

The different authors did not agree any better then than now and I found no encouragement from my dilemma. Opium seemed to be the only thing agreed upon, but I had tried it and seen it fail. I had already learned that time was valuable and action must be prompt. I was constrained to believe that the tendency to exhaustion could be best met by stimulation, and for that purpose I combined chloroform, tinct. camphor, tinct. capsici, tinct. opii and brandy, of which I gave liberally and frequently. I was pleased with the effect. It not only stimulated the patient but it relieved the cramps, and, I believe, had a controlling influence over the vomiting. At any rate sixteen of the seventeen cases recovered. To revert to my second patient: when I returned I found him much relieved of the purging and in every way better, and by the next morning he was well. I have no doubt that the injections of red oak bark were of great benefit to this patient. I adopted it in all of the other cases. This little outbreak of cholera, a partial account of which is here given, did not last more than two or three

weeks, and in accord with its peculiar characteristics, the greatest virulence and mortality were in the beginning. The cases I saw were not in the places infected, but were removed to their homes many miles away. There was but one case in which I had any suspicion of contagion, and that was the wife of one of my patients, who had a very slight gastro-intestinal irritation.

Dr. W. T. Howard, Jr., read a paper on "Heart Hypertrophy; an Analysis of 105 Cases from the Autopsy Records of the Johns Hopkins Hospital."

Dr. A. C. Pole read a paper entitled

A CONTRIBUTION TO THE LITERATURE OF FOREIGN BODIES IN SURGERY.

On September 7, 1885, G. W., who was assaulted by a crowd of roughs, presented himself to Dr. Pole with an incised wound between the anterior and upper part of the auricle and the temporal bone. The wound was examined and cleaned, and as the foreign body was neither seen nor suspected, the wound was stitched and dressed, and in a few days it had healed by primary union. Two years later the patient had a discharge from his ear, and behind a fungus-like growth could be felt what seemed to be a projection of uncovered bone. He was seen by an eminent specialist, who attempted at several sittings to remove the "bone," but without avail. Examination from time to time showed that the projecting body was lowering in the auditory canal and was becoming slightly movable. September 22, 1892, the patient was anæsthetized, and Dr. Pole removed through the external auditory meatus a piece of dagger blade measuring 31-32 of an inch in length, the point having entered the posterior wall of the canal and penetrated into the mastoid cells to the depth of about $\frac{5}{8}$ of an inch. The piece of blade had been in this position for seven years. The patient is now quite well. He has been relieved entirely of severe neuralgic pains from which he had suffered for several years past.

Dr. J. M. T. Finney related a case of

SEVERED FINGERS REAPPLIED SEVEN HOURS AFTER ACCIDENT,
WITH PERFECT UNION AND RECOVERY OF MOTION AND
SENSATION.

On January 2, 1890, the patient, a machinist by trade, came to the Johns Hopkins Hospital about half-past 12 o'clock, giving the following history: He was a machinist by trade, and was running the engine in the absence of the regular en-

gineer in a tin shop. He went to work about 5 o'clock that morning, and a little later while going about a machine used for chopping blocks of tin he dropped something, and while stooping down to pick it up his hand slipped under the knife, and the ends of the middle and the ring fingers were cut off. The middle finger was cut off just beyond the last joint. The joint was opened. The ring finger was cut off just above the root of the nail. This occurred, the man said, about half-past 5 o'clock. He wrapped up the stumps and went home, where his wife covered the wounds with beeswax. He arrived at the hospital at the time previously stated. I asked him where the stumps of the fingers were, and he produced them wrapped up in a piece of newspaper. They were very cold, almost frozen. I placed them in a basin of warm water, using no antiseptic, because bichloride or carbolic acid might cause a layer of coagulation necrosis and prevent union. I scrubbed up the stumps of the fingers with a 1-2000 warm bichloride solution, then I carefully rinsed them off in warm water. This process consumed at least half an hour. Then I took a shaving off the ends of the fingers so as to have a perfectly fresh surface. The stumps were treated in the same manner. The bone was scraped. I sewed them on, using four stitches in each case. I then applied strips of crepe lisse, with collodion the whole length of the fingers on each side. These held the severed portions in exact apposition. Then I used other strips around the fingers, binding them together, and then applied a palmar splint, and used a large absorbent dressing. He came back in a week, and when the dressing was removed the fingers looked very well. I reapplied the dressing, and told him to report in another week. Dr. Brockway saw the case on his return at the end of the second week. He took out the stitches and removed the dressing, and said that there was no doubt but that the fingers had united, and that the man seemed to have sensation at the ends of the fingers, although he thought that this sensation might have been transmitted. The man then disappeared entirely from view. He returned about a month ago with an injury to his other hand. It is difficult to say at first sight which hand was injured. There is a slight motion in the joint which was opened, and the sensation in the fingers is perfect.

Dr. Randolph Winslow—This case of Dr. Finney's calls to my mind a case which I had about fifteen years ago. I was called one day to see a woman who followed the occupation of an upholstress. She had chopped the end of her thumb off with a hatchet, perhaps a half an hour before I saw her. Upon making inquiry about the missing piece I was told that it

was about the floor somewhere. I hunted it up, cleaned it, put it on with adhesive strips, and it is there to this day. It is rather an important matter that we should replace these lost parts, and in many cases we will have success. I have a number of times replaced parts which were essentially cut off, attached by a minute portion of skin, with successful union.

WM. T. WATSON, *Secretary*.

THE TRI-STATE MEDICAL SOCIETY OF ALABAMA, GEORGIA AND TENNESSEE.

Fourth annual meeting, held in Chattanooga, October 25, 26 and 27.

First Day.

The society met at the Unitarian Church, and was called to order by the president, W. E. B. Davis, who presided during the entire session.

Opened with prayer by the Rev. W. J. Trimble.

Dr. Joseph Holt, of New Orleans, La., being present, was called to the stage and addressed the society.

Dr. R. J. Trippe, president of the Chattanooga Medical Society, welcomed the visiting members.

Response was made by Dr. E. T. Camp.

A paper was read by Frank Trester Smith entitled

TESTS FOR VISION,

in which he presented a test for use by the general practitioner, for which he claimed the advantage of greater simplicity than the ordinary test types, from the fact that the characters were only of one size and the test depended on the distance at which it could be read.

George Price called attention to the fact that patients are frequently subjected to considerable expense to journey a long distance to consult an oculist, when the general practitioner should be able to make the diagnosis. Many patients have normal vision, but can not read for any length of time. These cases should have an expert examination. A simple test for insufficiency of the muscles is with a dot of one-eighth inch in diameter, which will appear double when brought close to the eyes in insufficiency. The method of using this test was demonstrated.

E. L. Jones gave, as a simple test for errors of refraction, the use of a small perforation made with a pin in a card. If one sees better through the pin-hole, glasses will improve the vision.

Luther B. Grandy read a paper entitled

THE PRESENT DEMAND FOR BETTER MEDICAL EDUCATION IN
THE SOUTH.

He stated that the three evils at present in the majority of our southern schools are: 1. The non-requirement of preliminary education. 2. The two-term course. 3. The laxity of the final examinations.

He advocated that instead of that mercantile spirit of competition which seeks to catalogue the greatest number of students there should be an unselfish spirit of rivalry in giving those students that are honorably attracted the most useful and thorough preparation for their life work. The college that best succeeds in doing this will not want for patronage; but will quickly achieve the happy distinction of giving the greatest good to the greatest number.

James E. Reeves said that this sermon had been preached forty years ago, but that the condition was worse than ever, owing to the fact that the doors were thrown so wide open.

C. W. Barrier, of Columbus, Ga., presented a number of patients illustrating

TALIPES EQUINO-VARUS.

One of the patients had worn braces 16 years and could not walk without them; another had used an elastic dressing only four weeks, and could stand flat-footed and walk some. A number of cases were reported that had been operated on and had worn braces (steel) from 5 to 15 years, still being unable to go without them until treated by the elastic method, by which all were cured in from four to twenty months.

His theory was that braces prevent muscular exercise, contraction and development, and contribute to atrophy. He described the elastic dressings and gave an outline of the mechanical laws which governed their use.

W. L. Gahagan presented

A CASE OF KELOID

in an adult negro.

G. A. Baxter said that these cases were generally incurable, and that they often occurred on the site of burns.

James E. Reeves suggested the use of ergotine hypodermically, and reported a case so treated occurring in the practice of G. W. Drake. He had used this drug in the treatment of nævi.

E. Dixon suggested that these tumors might be removed by the use of electrolysis.

G. W. Baxter said that there was no trouble about the removal of the growth, but that it was sure to return, each succeeding growth larger than the others. He would not remove it unless it interfered with the usefulness of some organ.

M. B. Hutchins thought that by passing a strong enough current through the base of the tumor it might thus be destroyed.

Afternoon Session.

M. B. Hutchins read a paper on

EPITHELIOMA—SOME EXPERIENCE,

relating a number of cases. He concluded that it was better to leave an epithelioma alone unless it could be radically removed.

A. B. Burke favored the attempt at removal, which, if not successful, at least retarded the growth.

E. H. Kuykendall used caustic paste in treating epithelioma, and preferred sulphuric acid paste. This is preceded by curetting and leaves but little scar.

James E. Reeves called attention to the fact that the diagnosis by the microscope was easily made, and that cases often diagnosed as epithelioma are lupus. He thought that half of the author's cases were lupus. He has more confidence in the use of lactic acid than any other medicine.

J. M. F. Myers related a case of an ulcer on the finger of a boy which had resisted treatment, and asked if it might be a cancer.

In closing the discussion Dr. Hutchins said that he preferred the Marsden's paste, as there was less pain and less destruction. He had lived with epithelioma for three years in the New York Skin and Cancer Hospital, and did not expect to find that half his cases were not epithelioma. He did not think the microscope necessary to diagnose these cases, as they were well marked.

Henry Wise, Ph. G., read a paper on

THE RELATIVE VALUE OF PROPRIETARY AND PHARMACEUTICAL PREPARATIONS.

Proprietary preparations are such as are supposed to be for the exclusive use of the profession; some are meritorious, all are pharmaceutical preparations of more or less value, and have been known and used or discarded by physicians before their so-called inventors led them to the baptismal font and thrust them rechristened before the medical profession.

The greatest enemy of the proprietary medicine is the pharmacist, usually styled the "unscrupulous druggist." For fear the medical fraternity may not be misled they are notified that the druggist has not the laboratory facilities, even if he had the knowledge and experience, to make these concoctions. If the medical fraternity lacks confidence in themselves and the pharmacist, and feel that they must resort to proprietary medicines, they should at least be just enough to see whether the article has any virtue aside from the printed pleas and absurd claims for superior laboratory facilities and knowledge and experience. Proprietorship is right when used to protect something of merit and virtue. Pharmaceutical preparations are the legitimate outcome of medical investigation and research, and should have priority over its illegitimate offspring, proprietary medicines.

G. W. Drake said that there was a great difference between proprietary and patent medicines; it was right to use the one, but not the other.

James E. Reeves said that some of the proprietary medicines were dangerous, as Bromidia, which came near killing him at one time.

Mr. A. D. Roach did not think that the paper reflected on any reputable house.

Mr. Wise, in closing, said that it was preposterous for any one outside to dictate what the doctors should use. The legitimate druggist was the proper source from which the doctor should draw his supplies.

W. J. Killen, of Birmingham, Ala., read a paper on

SPECIAL VS. GENERAL PRACTICE IN MEDICINE,

taking the ground that the specialist is not the rival but the adjunct of the general practitioner, who should judge of the merits and educational advantages of any who aspire to be specialists and should frown down traveling and advertising quacks. The specialist should know general medicine.

G. W. Drake said that it depended on the man whether he should be endorsed or not. There should be greater preparation for a specialty than for general medicine.

Jno. P. Stewart thought that a general practitioner should know when an eye or an ear was diseased. Experience in general practice was a prerequisite for the study of a specialty.

J. C. LeGrand thought the author too severe on young men who were ambitious to enter special practice.

Frank Trester Smith said that the knowledge in general medicine could be most advantageously obtained in hospitals.

It was the rarest thing for oculists to make mistakes in diagnosis.

R. J. Trippe thought that all specialists referred all troubles to their special line, and that it was not right to send any except those who were not relieved after the general practitioner had exhausted his resources.

In closing Dr. Killen deplored the fact that there was a tendency for young men to enter a specialty before learning anything of general medicine.

Night Session.

G. A. Baxter presented

A NEW OPERATION FOR THE RADICAL CURE OF INGUINAL HERNIA.

W. D. Hoyt, of Rome, Ga., read a paper entitled

A CLINICAL STUDY OF THE RELATIONS BETWEEN SCARLET FEVER AND DIPHTHERIA.

He advanced the idea that scarlet fever is exotic at the South. Case reported of diphtheria succeeding scarlet fever in the same family. Cases of scarlet fever following diphtheria and coexisting with other cases in the same family. Both diseases are controlled by the same specific treatment. Loeffler's bacillus found in both, and the diseases can not always be distinguished from each other according to the best authority. They are liable to the same complications. May we not consider them as varieties of the same disease?

James E. Reeves claimed that scarlet fever was a distinct disease of weak contagion. Neither scarlet fever nor diphtheria can originate spontaneously.

Joseph Holt has never observed any combination of the two diseases. The scarletinal sore throat prepares the way for an attack of diphtheria, but the diseases are distinct.

H. Berlin considered the two diseases distinct and in no way related.

G. W. Baxter has seen isolated cases of both scarlet fever and diphtheria in Chattanooga.

E. Dickson, of Coal Creek, Tenn., related

THREE CASES OF WOUNDS OF LARGE ARTERIES

in which he had used compression instead of trying to ligate.

G. A. Baxter related a case of wound of the popliteal which was treated by pressure.

A. W. Boyd stated that in a case of fracture of the skull,

where the longitudinal sinus was injured, the bleeding was controlled by pressure.

R. M. Cunningham related a case of death from compression of the brain in a case packed with iodoform gauze.

E. E. Kerr related cases in which by treating with pressure in wound of the popliteal artery; also in a man who had his throat cut, with probably a wound of the carotid.

R. J. Trippe would in no case pack a wound of a large artery, but would ligate.

John P. Stewart said that ligation was the proper procedure, but thought it might sometimes endanger the nutrition of the limb.

H. Berlin said that pressure and ligation were practically the same. There was little danger from ligation of such an artery as the femoral.

W. D. Hoyt said that during the war Henry Campbell had successfully treated extensive inflammation of the leg, with beginning gangrene in one case, by ligating the artery.

Second Day.

J. W. Hallum, of Carrollton, Ga., reported

A CASE OF SEPARATION OF THE ABDOMINAL MUSCLES IN NORMAL LABOR.

In a primipara, aged 16, after being eight hours in labor, a tumor suddenly appeared. It was large and fluctuating, and situated in the median line. The recti muscles were separated from near the ensiform cartilage to within one and a half inches of the symphysis pubis. On drawing off two quarts of urine the tumor entirely disappeared and delivery was soon accomplished. The separation still exists, more noticeable when the patient is lying down, as when in a standing position the muscles are rigid, and close the opening through which a large mass of intestines escape when lying down. The doctor asked as to the dangers of another pregnancy, and for treatment at present and in the event of another pregnancy.

E. T. Camp thought that an abdominal bandage would be indicated.

G. W. Drake was at a loss to account for the accident, and thought it must have occurred prior to labor.

L. P. Barbour thought that the abdominal muscles played an important part in labor and could readily conceive how the accident could occur.

J. P. Stewart thought that the only remedy was to prevent conception.

J. C. LeGrand would be willing to risk another pregnancy.

R. M. Cunningham thought the cause was the distention of the bladder. When contraction occurred either the muscles or the bladder had to give way.

R. J. Trippe thought a laparotomy indicated, and that if the rent was sewn up there would be complete relief.

W. E. B. Davis asked if the uterus came through the walls.

Dr. Hallum said no.

Dr. Davis said that there were cases reported where the uterus protruded. As to an operation, he should be governed by the rules which obtained in other forms of hernia. If the patient was comfortable do not operate, but in this case as the muscles were separated for nine inches an operation might correct the defect.

Andrew Boyd, of Scottsboro, Ala., reported

A CASE OF IMPERFORATE HYMEN,

in which the symptoms were at first obscure, but finally the abdominal enlargement and delayed menstruation called for an examination. After operation there was complete recovery.

R. J. Trippe related two similar cases.

J. B. Cowan and R. M. Cunningham cited cases.

L. P. Barbour related a case where he had operated at the age of six months, and had thus saved all the unjust suspicions and other troubles related in the other cases. The condition was discovered by the mother.

R. M. Harbin read a paper on

PUERPERAL ECLAMPSIA, WITH REPORT OF CASES TREATED WITH NITRO-GLYCERINE.

After reviewing the history of the pathology of the disease, its clinical history and prognosis, two cases were reported treated with nitro-glycerine, 1-100 grain every hour. In both cases the fits were controlled before delivery. In one case two doses were given, in the other three bromide and chloral were also used. In both cases spasms came on before labor began. Nitro-glycerine is a harmless drug. It relaxes vaso-motor spasm. There is an increased reflex excitability in the pregnant state; when arterial contractions are set up this excitability is exaggerated, causing vaso-motor spasm of arterioles of the kidneys, thus producing acute suppression of urine and the consequent symptoms of uremia. By relaxing the spasm the nitro-glycerine relieves the symptoms.

E. T. Camp had never used nitro-glycerine and did not believe in it. First eliminate the poison (urea) and then free purgation, diuretics and diaphoretics. Control the central nervous system with bromide, chloroform, etc. Urea may be eliminated by venesection.

J. B. Cowan, as a prophylactic, gives chloroform gtt. x. t. i. d.

W. D. Hoyt believes there is engorgement of the portal circulation. He reported cases.

J. W. Hallum advocated large doses of morphine.

George Price said that in functional albuminuria the retina gave no sign; therefore, if in a suspected case you discover a discoloration of the retina you may give a favorable prognosis.

A. T. Park believes in elimination mainly by blood-letting.

Afternoon Session.

W. E. B. Davis discussed in a paper

THE AFTER-TREATMENT OF ABDOMINAL OPERATIONS.

He said that no line of treatment could be given for all cases. Those of ordinary gravity require but little treatment. Opium, as a rule, should not be given unless the patient has acquired the morphine habit. Nothing is allowed on the stomach for twenty-four or thirty-six hours, and not then if there is any tendency to vomiting. Liquids only are permitted the first week. For shock, enemas of whiskey and hypodermics of strychnia, digitalin, etc., are given and heat applied. Hæmorrhage can only be distinguished from shock by the presence of a tube, which should be emptied at first every ten or fifteen minutes. Tube should be removed in twenty-four to thirty-six hours. The bowels need not move until the third or fourth day, if no nausea nor tympanites. If nausea persists after twenty-four hours small doses of calomel frequently repeated, enemas of salts and glycerine, or large turpentine enemas will generally get the bowels to act. Stitches should be removed at the end of a week, after which adhesive plaster should be used. Patient should usually be in bed three weeks and wear an abdominal supporter for a year.

R. J. Trippe endorsed the paper *in toto*.

E. Dickson realized the importance of detail and cleanliness. Skilled assistants were hard to obtain in private practice.

J. B. S. Holmes thought that too large a drainage tube was used generally. The tube was left in too long. Generally twenty-four hours was long enough. The tube should be used

where there were adhesions. He had no trouble with hernia or abscess.

Joseph Holt, of New Orleans, read a paper entitled

PESTILENTIAL FOREIGN INVASION AS A QUESTION OF STATES RIGHTS AND THE CONSTITUTION ; THE FAILURE OF THE MARITIME STATES DEMANDS A COMMON DEFENCE.

In it he took the ground that as the maritime States had failed to maintain a consistent line of quarantine defence, as they had repeatedly permitted the incursions of pestilence, it was logically evident that protection can only be obtained through a common defence by organizing into system the sanitary barriers, international and interstate, locating the controlling authority in a national bureau, or board, on a permanent and solid foundation, purely scientific, and wholly removed from political influence or sectional prejudice. Said bureau to supervise sanitary foreign relations, co-operating with but not assuming police powers of a State vested in local health boards.

On motion the society extended a vote of thanks to Dr. Holt for his valuable paper.

James E. Reeves endorsed the position taken by the author, and complimented the society on being able to attract such men as Dr. Holt to read papers.

P. D. Sims remarked that this was an opportune time for the paper, owing to the threatened epidemic of cholera next summer. United States Senator Harris, of Tennessee, had presented a bill along the line suggested, and would renew his efforts to have such a law enacted.

G. W. Drake heartily endorsed the paper. He compared the system of warfare against foreign bacterial foes to that of our country against foreign military foes. Our coast defences should be under the espionage of the general government, because concert of action all along the line of outposts is essential to the safety of the interior. If a national system of quarantine is established the physicians in charge of the stations should be selected with as much or even more care than are the officers of the army and navy.

Night Session.

R. M. Cunningham, of Birmingham, Ala., in a paper, discussed the subject of

THE SURGICAL TREATMENT OF ENDOMETRITIS.

After studying the etiology and pathology of these conditions, the author pointed out the following indications:

1. To remove from the cavity all foreign structures, whether introduced from without, *e. g.*, gonococcus, or de-

veloped within, *e. g.*, retained decidua, placental tissue, fungosities, etc.

2. To remove all diseased tissue that is incapable of repair, *e. g.*, the thickened inflamed mucosa, etc.

3. To restore the uterus and its cavity to its normal size, by causing contraction and the absorption of hyperplastic elements.

4. To provide for proper drainage during the process of repair.

5. To promptly deplete the pelvic blood vessels.

These indications are effectually met by Polk's operation, which the doctor described in the words of Dr. Polk. He thinks it a thorough surgical procedure; that it removes from the uterus all diseased tissue and rapidly depletes the pelvic organs generally; it stimulates the uterus to contraction, causing absorption of the hyperplastic elements; it drains the uterine cavity, and the operation is not dangerous. The doctor reported ten cases, all of which were relieved symptomatically.

H. Berlin said that there was no panacea for endometritis. He had failed by this method. The treatment must vary with the cause. For six weeks after parturition the tissue was soft and there was danger of pushing the curette through the uterus.

R. J. Trippe cures his patients, and then paints with iodine.

W. G. Gogart had not had any good results from curetting.

W. E. B. Davis said that we should use discrimination; some should be operated on, others not.

John Purdon remarked that the uterus should be entered with fear and trembling. In one of his cases death resulted from a mild operation.

J. B. Cowan related the changes that had taken place in the treatment of these troubles, and thought that if we progressed as we should that most of them would be prevented.

G. A. Baxter emphasized the importance of drainage and the necessity of getting rid of all the diseased tissue.

W. T. Hope objected to the minutiae and red tape described in the paper.

E. T. Camp does not believe in packing, but after curetting washes out the cavity with a saline solution.

Dr. Cunningham did not claim that the operation was a panacea. It accomplishes as much as any procedure that does not remove organs. There was an increase of tissue in every variety of disease which should be removed.

Annual Dinner.—The annual dinner followed the night session at Aull & Clark's.

Third Day.

Opened with prayer by Rev. W. M. Pettis.

J. P. Stewart, of Attalla, Ala., read a paper entitled

DRUNKENNESS AND ITS GOLD CURE.

In substance, said that drunkenness produces more disease than any other known cause, likewise more insanity, more sin, crime and death. Keeley, with the cunning of a trickster, saw a golden opportunity, and took it. He keeps his remedy a secret, because he knows it is a humbug, and to further his own ends, to entice deluded fools to take his remedies. Of course, it is no good. Those who claim to be cured are either deluded or paid to say so. The remedy is prevention, as we use antisepsis in surgery, quarantine against cholera and yellow fever, and vaccination against small-pox, and in our sanitation and hygiene. It is much more necessary to quarantine against this much greater evil by stopping its sale.

J. E. Purdon thought that the great good of these institutions, which could not be denied, was from concentration of thought and suggestion.

Willis F. Westmoreland had seen cases where the only good was from the fact that the patients had less cash to buy drinks. The surroundings and associations are the only advantages of the Keeley cure. They should be kept in proper surroundings for a year or two. Time is important for the development of muscles and the nervous system. In a small number of cases drunkenness was hereditary, and these cases usually die inebriates.

G. T. Prince thought that environment was of the utmost importance. Religion was the great remedy and safeguard.

J. B. Cowan related a case in which after taking the cure the man seemed to be in a state of exaltation. After a few weeks the man got on a spree and died in forty-eight hours. He had heard of two similar cases. In the insane asylums there are many cases in which the insanity is attributed to the use of the Keeley remedies. Psychological influences have much to do with the cure.

E. E. Kerr thought the Keeley system would be of use to the profession and it should be studied. Keeley had made a success of making money.

Afternoon Session.

Richard Douglass, of Nashville, presented a paper on

EXTRA-UTERINE PREGNANCY,

and related a case presenting some unusual features. There had been rupture into the peritoneal cavity some weeks before

operation. There was a sheet of clotted blood over the intestines. The symptoms were frequent colicky pains attended with symptoms of collapse. The time for operation in these cases is not when they are in a state of shock, but after reaction sets in. It is very rare for these cases to die from the first hæmorrhage.

J. R. Rathmell related a case and advocated operation, if the diagnosis was at all probable, as soon as possible after reaction set in.

R. J. Trippe said that diagnosis was all-important and all the signs should be considered and the operation not deferred.

E. T. Camp related a case which was operated on almost in collapse for diagnosis. Death occurred in twelve hours.

R. M. Cunningham thought the condition very rare.

G. A. Baxter dwelt on the importance of an early diagnosis, but this was not easy, as no one symptom could be relied upon.

W. E. B. Davis said that the general practitioner should diagnose these cases in time to save the patients. He endorsed the position of the author not to operate in time of shock.

Dr. Douglass said that the question was one of diagnosis. If the decidua of pregnancy was found in the uterus it was decisive. The microscope should be used. The main symptom was collapse.

Night Session.

The Committee on Necrology reported a set of resolutions, which were adopted, on the death of

J. C. Shaperd, Winchester, Tenn., Vice President of the society.

H. Crumley, Professor of Anatomy, Chattanooga Medical College.

Chas. Meigs Wilson, Professor of Obstetrics, Tennessee Medical College, Knoxville.

Gus. McNabb, Graham, Texas.

John E. Purdon read a paper on

ADVANCED THEORIES OF PSYCHICAL SCIENCE.

He opened with the statement that protoplasm was the scientific basis of any consistent system of psychics. He argued that protoplasm, the physical basis of life and mind was two-sided, inasmuch as, while it was to all intents and purposes a chemical compound, it also possessed the primitive element of subjectivity of feeling, as exhibited in its reaction to external stimulation. In his opinion life in its widest sense of primeval activity was always in existence, but that the undifferentiated

potentialities of the beginning required a developed organism to result in thought, and that the process of development which we term evolution did *not* negative the idea of design; because the completion of the process reconciles the apparent contradiction involved, by showing the beginning and the end, the potential and the actual, as two correlative aspects of the same transcendent reality, when projected on the plane of the human understanding, in accordance with the working of its formal laws.

J. B. Cowan thought the profession lacking in the study of the philosophy of life along the line of psychical science. All the phenomena of life are the result of the correlation of forces acting on matter.

Thought was the result of the correlation of forces properly arranged.

A force once put in motion is eternal.

G. W. Drake remarked that the mind could think independent of the body or it can use the brain as an organ.

R. M. Cunningham thought the paper not a proper one for this society, as it dealt with a subject not familiar to most of the members.

Dr. Purdon, concluding the discussion, remarked that it was the duty of the physician to understand the most advanced theories of life, since the preservation of life was his sole aim and object, adding that the larger life in its social and cosmical sense had also to be considered in the generalizations of the educated physician.

A paper by R. H. Hayes, of Union Springs, Ala., was presented describing a case of injury to some of the cervical vertebræ combined with transverse fracture of the occipital bone, producing complete spinal paralysis from the tips of shoulders downward, patient surviving six and a half days.

A paper by H. W. Blanc, of Sewanee, Tenn., was also presented reporting

CASE OF SKIN SHEDDING.

A young woman had been suddenly attacked with nausea and vomiting. This was soon followed by a rash resembling that of scarlatina, accompanied with a slight elevation of temperature. In about three days the rash disappeared, when the whole epidermic surface began to exfoliate in large flakes, that of the hands and feet coming off almost intact, presenting the appearance of natural gloves and moccasins. The finger and toe nails fell off about two weeks subsequently. The remarkable part of the case is that the disease is a relapsing one, this being the third attack. Several cases of this affection have

been previously reported by Dr. Blanc, who suggested that it be called "Erythema Exfoliatum Recurrens," describing the three main characteristics.

The following officers were elected for 1893:

President—Richard Douglass, Nashville, Tenn,

Vice Presidents—Robert M. Harbin, Calhoun, Ga.; R. M. Cunningham, Birmingham, Ala.; Y. L. Abernathy, Hill City, Tenn.

Secretary—Frank Trester Smith, Chattanooga, Tenn.

Treasurer—W. C. Townes.

Recorder—W. L. Gahagan.

The society adjourned to meet in Chattanooga, the third Tuesday in October, 1893.

ASSOCIATION OF AMERICAN ANATOMISTS.

The fifth annual session will be held on Tuesday to Thursday, December 27 to 29, 1892, at Princeton, N. J.

The American Society of Naturalists, the American Physiological Society and the Society of Morphologists will meet at the same time and place.

The Association of American Anatomists will meet in Zoölogical Hall of Princeton University. The opening session will be held on Tuesday afternoon at 2 o'clock. The session will continue daily from 9 A. M. to 1 P. M., unless the association shall decide otherwise, until the papers have been read and business transacted. Executive committee meeting daily at 8:30 A. M.

Officers for the years 1891-1892: Harrison Allen, M. D., Philadelphia, president; Charles Heitzmann, M. D., New York City, first vice president; Theodore N. Gill, M. D., Washington, D. C., second vice president; D. S. Lamb, M. D., Washington, D. C., secretary and treasurer.

Executive Committee: Burt G. Wilder, M. D., Cornell University; Thomas Dwight, M. D., Harvard University; E. C. Spitzka, M. D., New York City; the president and secretary, *ex officio*.

Committee on Anatomical Nomenclature: Harrison Allen, M. D., Philadelphia; Frank Baker, M. D., Washington; Thomas Dwight, M. D., Harvard University; Thos. B. Stowell, Ph. D., Potsdam, N. Y.; Burt G. Wilder, M. D., Cornell University, secretary.

Delegate to American Congress of Physicians and Surgeons: F. J. Shepherd, M. D., Montreal, Canada; alternate, R. W. Shufeldt, M. D., Washington, D. C.

The following papers will be read or specimens presented, with remarks. It may be necessary for the convenience of members or the association to change the order. It is probable that other papers will be presented, the titles of which have not yet been received.

1. History of the Development of Bone Tissue. Illustrated by microscopic slides. By Dr. Carl Heitzmann, New York City.

2. Crania of the Cetacea. (15 minutes.) By Dr. Harrison Allen, University of Pennsylvania.

3. The Human Lower Jaw. (10 minutes.) By Dr. Allen.

4. Comparative Structure of the Hyoids in Man and the Apes. By Dr. J. L. Wortman, American Museum of Natural History, New York City.

5. Human Sternum, with Episternal Bones and Sterno-Humeral Ligament. Specimens, with remarks. By Dr. F. J. Shepherd, McGill University, Montreal.

6. Observations on the Psoas Parvus and Pyramidalis. A study of variation. (15 minutes.) By Dr. Thomas Dwight, Harvard University.

7. Significance of Percentages in Reversions in Human Anatomy. By Prof. H. F. Osborn, Columbia College, New York.

8. Series of Thirty-five Natural-size Photographs of Sections of Human Brain, with brief remarks. By Dr. I. S. Haynes, University of New York.

9. Histogenesis in the Brain, and Its Bearings on Development and Decline. (15 to 20 minutes.) By Prof. C. L. Herrick, University of Chicago.

10. The Metapore or Foramen of Magendie. (30 minutes.) By Prof. B. G. Wilder, Cornell University.

11. Neuromerism and the Cranial Nerves of Ophidia. (7 to 10 minutes.) By Prof. Herrick.

12. The Insula of the Pig. By Tracy E. Clark, B. S., Clinton Liberal Institute, Fort Plain, N. Y.

13. The Posterior Surface of the Liver; described by Vesalius. By Dr. F. H. Gerrish, Bowdoin College, Maine.

14. Embryos of Bats. (20 minutes.) By Dr. Allen.

15. Meckel's Diverticulum. By Dr. D. S. Lamb, Army Medical Museum, Washington.

16. Delimitation of Abdominal Regions. By Dr. E. A. Balloch, Howard University, Washington.

17. The Need of Agreement in the Limits of the Abdominal Regions. By Dr. Gerrish.

18. Title not received. By Prof. Alex. F. Chamberlain, Clark University, Worcester, Mass.

NOTICE.—The following is the clause of the constitution relating to new members, and the secretary requests that applications intended to be presented be sent to him at the earliest opportunity:

SEC. 8. Candidates shall be proposed in writing to the Executive Committee by a member. Each proposal shall be made at or before the first session of any regular meeting of the association. The proposal shall state the official position or occupation of the candidate and the character of his investigations. The election shall take place by ballot in open meeting, a two-thirds vote being necessary. Honorary members may be elected from those, not Americans, who have distinguished themselves in anatomical research.

THE "STRIKE" AND THE MEDICAL COLLEGE.

During the month of November, 1892, New Orleans went through the throes of a general labor strike. Nearly all branches of trade were paralyzed. The supply of gas became exhausted, and the electric lights gave forth no comforting radiance, because the operatives did not want the said radiance to go forth. From November 3 to November 10 the city was almost in a state of anarchy; a state of minor siege would have been a luxury by contrast. In the medical college the dissecting room is lighted by gas. As the gas supply was suddenly cut off, the students had to get along as well as they could with candles. Upon entering the dissecting room the visitor's gaze rested upon a double row of tables, upon each of which lay a subject covered with a cloth, and at the foot of each table several tall candles stood guard over the prostrate form. The whole presented the appearance of a wholesale "wake;" but the scene quickly changed upon the arrival of the students, who went at their work with an ardor that could not be cooled by such a trifle as poor light. Fortunately, the trouble ended in about a week, and the dissecting room resumed its former bright and busy aspect.

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EDITED AND PUBLISHED BY

AUGUSTUS McSHANE, M. D

COLLABORATORS:

DR. F. W. PARHAM,

DR. H. W. BLANC.

DR. A. W. De ROALDES.

DR. R. MATAS.

DR. JOHN DELL'ORTO,

Editorial Articles.

THE PAN-AMERICAN MEDICAL CONGRESS.

In September, 1893, a notable gathering of the physicians and surgeons of the western hemisphere will take place. From every land between the Atlantic and Pacific oceans eminent men will journey to Washington to be the bearers of their countries' contributions to medical science. The first Pan-American Medical Congress will bring together medical men from all the Latin and Anglican countries of the New World. What this means must be evident to any one who knows the value of united effort in the advancement of any cause. The march of progress is breaking down the barriers that have always stood in the way of the betterment of the human race. In material progress the great republic of the North has made wonderful progress; and it has contributed no inconsiderable share to medical learning. The difference in the languages of our country and the Spanish-American countries has hitherto proven a serious barrier to concert of action; now, however, scientific men have resolved to let that act as such no longer, and to form themselves into one brotherhood for promotion of the common weal.

The congress will, apart from its scientific value, have an excellent effect in introducing to each other two widely separated classes of men. The American physician is eminently a practical man; he is an original investigator and a contributor of solid, though unsymmetrical, chunks of medical knowledge. Our Spanish-American brethren are more polished, more finished than the average Anglo-American; he does not display any great fondness or aptitude for original research. The North American goes straight to the point, sometimes sacrificing elegance in the search for utility; the Spanish-American never for a moment loses the grace and dignity that are essential parts of the Spanish character. Our neighbors are excellent reviewers and digesters of other men's works; their keen, analytical minds and fine scholastic training specially fit them for the task of separating the good from the evil, and estimating at its true value any scientific work.

The Spanish-American physicians generally go to Paris for their medical education; those who attend their home colleges have to study much longer than the average American physician. In Mexico a course of seven years is required, and in Havana six years. It seems preposterous to the inhabitants of the countries to the south of us that a man with little preliminary education should have a good chance to secure his degree in medicine in two years.

One effect of this state of affairs in our country has been to cause our medical neighbors to regard the average American physician very lightly—we say *the average American physician*, for these people, who are more discerning than ourselves, have a well founded respect for the princes of the American medical world. They know and appreciate, better perhaps than many of us do ourselves, the valuable services rendered to surgery by such men as McDowell, Sims, and a host of others; and they know, further, that we do possess colleges and laboratories and facilities for clinical teaching equaling those of any of the European centres; but they know also that such colleges and the large hospitals do not exist in every one of the small interior towns that happens to be burdened with one or more medical colleges.

The average Spanish-American physician is far above his

average North American brother in polish and literary and scientific attainments; but we make bold to add that the foremost of our medical men are their peers in the scholarly arts, and their superiors in all things that are the outcome of bold originality of thought, mechanical and manipulative skill, and patient and persevering labor. When these two classes of men come together time after time, we may confidently look forward to a reaction that shall be mutually beneficial. They shall become better acquainted, and each class shall learn to admire and imitate the admirable qualities displayed by the other.

It should be a matter of pride to every American physician to make the first of the Pan-American Congresses a brilliant success. We are the hosts, and as such we should feel our responsibility in receiving our guests in a manner befitting their station, and creditable to ourselves. The work of organizing such a vast meeting is colossal, and the expenses incident thereto are considerable. A report of the result of the Committee on Permanent Organization was given in the JOURNAL, August, 1892. Dr. Chas. A. L. Reed, of Cincinnati, is the secretary general and chairman of the Committee on Permanent Organization, has issued a preliminary report which indicates that those in charge of the work of organizing have not been idle. The expenses incurred in the work of organization are about \$5000, and these must be paid out of advance registration fees. The article on "Registration," of the "Special Regulations of the First Congress," says: "The registration fee shall be \$10 for members residing in the United States, but no fee shall be charged to foreign members. Each registered member shall receive a card of membership and be furnished a set of the transactions." Every American physician who feels that he is able to attend the Congress should help in the good work by sending his registration fee in advance to the treasurer, Dr. A. M. Owen, of Evansville, Indiana.

THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

As will be seen in the report of the proceedings of the recent meeting of the Southern Surgical and Gynecological

Association, printed elsewhere in this number, the next meeting will be held in this city. Dr. A. B. Miles, house surgeon of the Charity Hospital, has been appointed chairman of the Committee of Arrangements. The meeting of the American Medical Association in this city in 1885 demonstrated the willingness and ability of the local profession to receive their visitors in a cordial manner, and we do not doubt that the forthcoming visit of our brethren will again provide us with an opportunity to make them feel that they are not among strangers, but among those who will leave no stone unturned to make their visit a pleasant one.

Abstracts, Extracts and Annotations.

MEDICINE,

THE TREATMENT AND MANAGEMENT OF ASTHMA.*

By THOMAS J. MAYS, M. D., Professor of Diseases of the Chest in the Philadelphia Polyclinic, and Visiting Physician to the Rush Hospital for Consumption, of Philadelphia.

Asthma is a paroxysmal disease of the pneumogastric nerves which throws the muscular fibres into spasmodic contraction. Its prominent symptoms are itching of the head and neck, oppression and tightness of the chest, dyspnœa, bloating of the abdomen, pain in the region of the diaphragm, cough, expectoration, and fever. Its causes are predisposing and exciting. It may be inherited as asthma, and it may appear in children who come from consumptive or nervous families. It seems as if there is a predisposition necessary before the disease can develop.

Among the exciting causes are the inhalation of dust, powdered ipecacuanha, pollen of grasses and of roses, odors of certain animals, as cats, sheep, etc.; reflex excitation coming from the nose, stomach, liver, intestines, uterus, etc. Its relation to hay fever is very close. Practically there is no difference between the two. I find that that which relieves the one will also relieve the other.

*An abstract of a lecture delivered to the class in the Philadelphia Polyclinic, November, 1892.

Its treatment resolves itself into that which aims to give immediate relief from the paroxysm and that which aims to prevent a recurrence of the paroxysm.

Those remedies which relieve the paroxysms may be classified as follows: Central narcotics, consisting of morphine, belladonna, stramonium, hyoscyamus, tobacco, chloroform, ether, ethyl, bromide, etc.; emetics, consisting of lobelia, ip-eacuanha, sanguinana, etc.; and the peripheral narcotics, or relaxants, consisting of nitro-glycerine, amyl nitrite, sodium, nitrate, pilocarpine, etc. Now all our more or less powerful therapeutic agents are stimulants to the general or special bodily tissues which they affect, in small doses, while in large doses they paralyze the same. All the above named agents only relieve asthma when given in large or paralyzing doses—the central narcotics exerting their influence on the central nervous system, the emetics acting on the pneumogastric filaments, while the peripheral narcotics paralyze the vaso-motor or sympathetic nerves which supply the unstriped muscular fibres of the bronchial mucous membrane and blood vessels. While all these agents relieve asthma, and indeed in some cases are indispensable, it is quite clear that in doing so they lower or depress the functions of the parts on which they act, and that they do not therefore come up to the ideal of an asthmatic remedy. The best among them are nitro-glycerine, one or two minims of a one per cent. solution every three or four hours, by the mouth, and one-twentieth or one-tenth of a grain of morphine, hypodermically, once or twice a day.

What then is the remedy which may be given continuously for the alleviation of this disease and without the undesirable effect of the above named classes? Which drug will relieve asthma in stimulant doses? Such a drug, I believe, we possess in strychnine—of course, we must bear in mind that all stimulants are only supplementary agents which maintain the functions of the body without adding any direct material support to the same; but there is also good reason for believing that they cause the tissues to appropriate a larger amount of nutritive material than they would otherwise do, and in this way our stimulant drugs become tissue builders.

It has been shown that the power of strychnine in this respect is greater than that of any other stimulant. This drug has a special affinity for the nervous system, which action is especially accentuated on the respiratory centre and pneumogastric nerves. In stimulant doses it gives a supporting influence to the respiratory movements, and, unlike lobelia, belladonna, nitro-glycerine, it does not depress or narcotize the nervous system. Asthma, being a spasmodic disease, in what

manner does strychnine bring relief? How does it act as an anti-spasmodic? The most probable theory of the spasmodic state is that there is at the beginning of the paroxysm a superabundant discharge of nerve force through the pneumogastric nerves, which throws the bronchial muscles into contraction. But whatever the nature of the condition may be it is evidence of nerve degradation, or nerve weakness, and strychnine, by elevating the tone of these nerves, increases the controlling power of the same.

A stimulant dose of strychnine will depend on the age of the patient and length of time during which the drug has been given; although asthmatics, as a rule, will bear larger doses of strychnine than most other patients. Begin, as a rule, with one-thirtieth of a grain subcutaneously once a day and gradually increase to one-twentieth or to one-tenth of a grain, or more, if necessary to impress the system with its full stimulant effects. Do not waste your time with small doses. To these amounts of strychnine small doses of from one-four-hundredth to one-six-hundredth of a grain of atropine may be added. It is best to administer these drugs in the evening, because asthma is nocturnal in its attacks, and your patient should be protected at night so he can sleep. Additionally to its hypodermic use this drug may be given in the following combination:

℞ Phenacetini.....	gr. lxiv.
Quininae sulph.....	gr. xxxii.
Ammon. Murias.....	3 iss.
Pulv. Capsici.....	gr. iv.
Strychninae sulph.....	gr. 1½
M. Ft. capsulas.....	No. xxxii.

Sig. One capsule four times a day.

Or in the following:

℞ Strychninae sulph.....	gr. 1½
Syr. acid hydriodici.....	
Syr. hypophosph.....	aa. fl. ʒ ij.

M. Sig. One teaspoonful four times daily.

In fact light cases of asthma require no hypodermic injection and do well enough where the above named preparations are given. In severe cases, it is, of course, advisable to add morphine or nitro-glycerine to the strychnine and atropine treatment, especially at the beginning. This treatment will break up the paroxysms, but even after they are broken many old asthmatics still remain in the most abject misery. They may be compelled to sit up day and night panting for breath and still labor under the impression that they are suffering from asthma. This is a mistake—it is not asthma, but the natural state of exhaustion which follows asthma. The respiratory movements, as well as the whole nervous system, are almost completely paralyzed. It is disorder and chaos following

the flood. The dyspnœa is not paroxysmal as before, but is felt now on the slightest exertion. This stage of the disease is most important from a therapeutic standpoint. Nitro-glycerine, lobelia and other narcotics are of no use. Rest is most essential now. They must do absolutely nothing. Lie down if they can or sit still. They should even be fed. I have known patients who were breathing comfortably bring on a most severe exhaustion—dyspnœa—by merely undertaking to write a letter. During the rest of the treatment give food of the most nourishing character, such as freshly expressed beef juice, a cupful a day; beef powder, beef, mutton, milk, oysters, clams, etc. In this stage strychnine is also of the greatest value.

Massaging is also to be used in desperate cases. Electricity is also of great service. So are racefield air, and calisthenic exercises obtained in the pneumatic cabinet treatment. To procure sleep at night morphine may be added to the hypodermic injections of strychnine.

Success in treating asthma depends as much on the proper management of the individual as it does on the administration of drugs in the proper doses and at the proper time. Principles can only be carried out by paying attention to details, hence each patient must be under the complete control of his physician in regard to his food, medicines, exercise and everything else. This pertains particularly to old asthmatics who are constant sufferers. If the instruction which is given this evening is closely followed there are very few cases which will not yield to it; and as an illustration of what may be done in desperate cases I will conclude by relating the condensed histories of the two following examples, the second of which is still under occasional observation.

CASE I. A, aged 46, a sufferer from asthma for thirty-five years, the attacks becoming more frequent and severe during the last three years. For four weeks before coming under observation he had been unable to lie down on account of his disease. The injection of strychnine (gr. $\frac{1}{25}$) and morphine (gr. $\frac{1}{15}$) gave him almost immediate temporary relief. The morphine was discontinued after the second day, and one minim of a 1 per cent. solution of nitro-glycerine every four hours was substituted. The strychnine was gradually increased and the nitro-glycerine omitted in the course of a week. Additionally he was kept quiet, received nourishing food and strychnine by the mouth. In three days he was able to lie down, and in ten days more his asthma ceased.

CASE II. B, aged 50, an asthmatic for twenty-five years. Daily attacks for one year, during which time he had been

unable to lie down, day or night. Came under observation six weeks ago, and received about the same treatment as the previous case. The relief was prompt after each injection, but this had to be continued nightly for five weeks to keep the stubborn disease in abeyance. In two weeks he was able to lie down, and is now practically well.

SURGERY.

A DISCUSSION ON THE SURGERY OF THE THROAT.

At the sixteenth annual meeting of the British Medical Association held in Nottingham, July 26 to 29, 1892, Dr. Rickman J. Godlee, M. S., F. R. C. S., surgeon to the University College Hospital for consumption and diseases of the chest, Brompton, read the following address:

EMPYEMA.

To introduce a discussion on the surgery of the thorax in half an hour will not allow an ornamental exordium, and I shall be fortunate if I ever reach the peroration, so I will at once plunge *in medias res* by asking why the treatment of empyema is, as all allow, so much more successful than it was twenty years ago. I read my surgery in the fifth edition of Erichsen, 1869, where it is written: "If the accumulation be an empyema, the cannula or an elastic tube may be left in the chest, and the pus drawn off, or removed as it accumulates, or a gum catheter or drainage tube may be left in, and the pus allowed to drain off as fast as it is secreted. Should air have got admission into the pleural sac it will be necessary to make the opening free, so as to secure a ready exit for the fluid, lest putrefactive changes ensue in it." And then follows a description of the method adopted by Goodfellow and De Morgan of introducing a Chassagnac's drainage tube through a puncture made by a cannula in the sixth space in front, and another in the lower part of the chest behind. When we remember the small size of the original Chassagnac's drainage tubes and the prevalence of putrefaction in those days, the answer is easily found. We are more successful now because we make our openings very free, and our success depends in great measure upon the attainment of perfect drainage in all positions of the body, but not a little on the prevention of septic changes in the fluid secreted by the freely opened pleura.

Site of Election for Incision in Empyema.

And now I would reiterate an often expressed opinion that, in a complete empyema, no position is better—none, indeed, is so good—as that opposite the ninth rib, just outside the angle of the scapula, for (1) it is just above the level to which the diaphragm becomes adherent to the ribs when it has been drawn up as much as possible. (2) It is, therefore, very soon, if not at first, one of the most dependent parts of the pleural cavity when the patient is standing up, and it is always the most dependent part when he is lying on his back. (3) Because (and this is a much more cogent reason) I practically find that this is a much more advantageous position for the opening. I do not think I have ever had to open one in front because the posterior opening did not answer, but I have often had to supplement an anterior or lateral by a posterior opening, because the former did not drain the lower and posterior part of the pleura.

After all, a practical reason is much better than a theoretical one, otherwise one might be over-persuaded by the theoretical assertion that the last part to close ought to be the side of the chest; or that, as nature so often selects the fifth interspace at the edge of the pectoralis major for spontaneous rupture, we should follow her example; or we might be deterred by the assumption that the division of the *latissimus dorsi* would be a source of trouble afterward, or that the angle of the scapula must get in the way. Far be it from me to assert that all cases will get well if the spot I advocate be chosen, or that none will recover if the axilla be selected. I only maintain that in the greater number of cases it is the best place.

Removal of Rib as a Routine Practice.

Let me also very briefly state the arguments (to me convincing) in favor of removing a piece of rib as a routine practice with very few exceptions. 1. It allows of the best possible exploration of the pleura with fingers and probes. 2. It permits of the evacuation of masses of lymph. 3. It obviates to a great extent the difficulty, which is common afterward, of retaining or reintroducing the tube. And let me thus answer the common objections to it: 1. "That it is unnecessary." Granted in a certain number, but it is uncertain at the time of operation which these cases will be, whilst in the majority it is of great value, and, except for one very rare contingency, it is perfectly harmless. 2. "The rib may not be regenerated." Again granted in exceptional cases, but, even if this do occur, it apparently makes no difference to the patient. 3. "It pro-

longs the operation and makes it more severe." These assertions can not exactly be gainsaid, but the increased time and severity are really trifling; and, in case the patient be so ill that they are of importance, I would omit the resection. If it be merely a question of danger from the anæsthetic owing to distention of the pleura, a certain amount of the fluid may either be drawn off by an aspirator, or the intercostal space may be incised before the rib is removed.

I did this in a gentleman who had a tropical abscess of the liver which had burst into the right pleura, which, after a few days, became greatly distended, so that the breathing was much impaired. It would have been quite unsafe to give him chloroform under these circumstances, but it was most important to anæsthetize him, in order to search for the opening through the diaphragm; and for various reasons this exploration could not be postponed to another day. After drawing off a large quantity of thin pus, he took the anæsthetic quite well during a somewhat prolonged operation.

In a very putrid case there may be a danger of the tube causing ulceration of the intercostal artery. So, under these circumstances, it is best to divide the artery and tie it in two places. I always employ a single flanged red rubber drainage tube as large, for an adult, as the little finger; smaller for a child. It should be just long enough to enter the chest cavity, and have not more than one, or at most two, holes close to the end. It should never be shortened, but when the time comes for its removal, removed altogether. One of smaller bore than the original may often conveniently be substituted during the progress of the case. Rigid tubes are sometimes, if not generally, painful, and are not required when a piece of rib has been removed.

Method of Ending a Case of Empyema.

The time of removal of the tube depends upon the amount and character of the discharge. Thus no definite period for it can be stated, but in young children, if the case be uncomplicated, the tube can commonly be dispensed with in ten days or less; in adults in three weeks, but it must often be retained much longer and it is best to err, if at all, on the safe side.

If the discharge be serous and small, sometimes even although it be purulent, closure of the cavity may often be obtained by removing the tube and tapping the cavity with a railroad catheter, at first daily, then at two or three or more days' interval. Thus the absorbing power of the pleural vessels is brought into play to aid in the closure of the cavity. If, after three or four days, only a drachm or two of clear

serum escapes, the periodical tapping may be omitted. If the fluid remain, or become purulent, it must be continued, or else—and this is usually the best plan—the tube must be put back.

Method of Opening a Very Bad Case.

In any case it is well not to put the patient far over on to his sound side; but he should be brought over the edge of the table, and the operator should, if necessary, sit down. If the chest be very full, a good plan is to place the patient well over on the diseased side—semiprone in fact. It will then be found quite easy to reach the ninth rib outside the scapular line, by standing behind him.

I believe a little chloroform is, on the average, the best anæsthetic to employ—that is, not enough to produce very profound anæsthesia. An anæsthetic should never be used for simple aspiration. Ether is especially contraindicated where expectoration is a feature of the case, or where the chest is very full. It may be safely used in operating on old previously opened cases, or in those where the respiration is unimpeded, and there is no expectoration.

Let me now say a word about two classes of empyema in which considerable caution must be used.

Double Empyema

is not perhaps so rare as one might be apt to think. A single empyema is occasionally missed. Sometimes this is revealed at a *post mortem* examination, sometimes no doubt the matter is inspissated and absorbed. So, also, a second small empyema may sometimes escape notice when one side has been dealt with. Some double empyemata are septic, and then fortunately they are likely to be localized. Some are probably tuberculous. If the case be septic it may be very acute, and so it may be almost essential to operate on both sides, either at the same time or within a very short period of one another. But if there be no hurry, I can see no reason for doing both at once, and it must involve some risk, for it is impossible to be certain of the extent of adherent lung on either side. Moreover, the mere opening of one side only often causes considerable disturbance of respiration, which in a few hours or a few days is recovered from. I have heard of a well authenticated case where the accidental wound of the sound side of a patient with a single discharging empyema proved fatal, so I can not doubt that the right practice is to open first one side and let the patient get thoroughly accustomed to this modification of his thoracic arrangements, and then in due time to tackle the other. My own experience is

confined to three cases—one in which the second empyema was undiagnosed in a tuberculous baby; one in a child, where the first was almost healed before the second opening had to be made; and one in a young lady who, after a septic throat, developed double empyema, possibly pericarditis, and certainly acute suppuration of the hip joint; the latter I incised very early, and, though she had also large bed sores, she has made a remarkably good recovery.

Tuberculous Empyema and Pyopneumothorax.

Much caution should be observed in dealing with these cases, especially in adults. I do not say that they are never to be freely incised, but I believe that, if the disease be quiet, a free incision will almost certainly accelerate the patient's death, and I would submit a method of dealing with these cases which, in two or more instances, has in my hands proved successful. Into the anterior part of the chest a needle is to be inserted, connected with an india rubber tube passing into a bottle containing some sterilized or antiseptic water—say, for example, concentrated solution of boric acid, or 1 in 4000 sublimate solution—another needle, connected with the bottle aspirator, is then inserted into the most dependent part of the chest, and the pus is drawn off. After a while the fluid begins to flow in to replace the pus, and at last it will flow clear into the aspirator bottle. Then the anterior needle may be taken out and the greater part of the liquid may be withdrawn from the pleura.

A simple pneumothorax may be much relieved by drawing out the air with the aspirator. I refer to cases arising spontaneously. It is well known to be of service in traumatic cases.

Mortality from Empyema.

One is apt to speak nowadays as if all empyemata recovered, but this is not the case. I have, quite in recent years, seen or heard of one dying before it was opened; two chronic cases of an acute, presumably septic, nephritis, with albuminuria; four or five of cerebral abscess, one of amyloid degeneration; one of hæmorrhage, one of shock; one, quite suddenly, presumably of embolism or heart failure, whilst apparently doing quite well, some days after the operation; and some chronic cases during the course of irrigation. I am myself astonished, considering how well most cases do, in drawing up this list. Let me say a few words on some of these modes of death.

Injection.

It has not yet been proved why deaths sometimes occur during the washing out of empyemata—perhaps chronic ones, in which the same process has been carried out apparently in precisely the same manner and under exactly similar circumstances often before. It does not appear to depend upon the sort of fluid employed, nor upon the side of the chest affected.

Under these circumstances it is probably wisest to avoid washing out unless it seems to be absolutely necessary, and to take particular care that no pressure of fluid is ever produced inside of the chest—though it has not been proved that intrathoracic pressure is the cause of the fatal result. Fortunately, the cases in which irrigation is necessary are very few. I never employ it unless the discharge remains or becomes offensive several days after the opening has been made. The most stinking cases generally become quite sweet in a few days after incision, and, indeed, very often behave just as well as the aseptic ones. If it must be done, the patient should be in the recumbent posture, and a small tube—much smaller than the opening—say a No. 8 or No. 10 Jacques catheter, should be attached to the end of a longer india-rubber tube, which, in its turn, is attached either to a simple glass funnel or to an irrigator. Whichever of these be employed, it should not be raised more than 18 inches above the level of the patient. I have generally used either tincture of iodine, mixed with water, till a sherry color is produced, or a 1 or 2 per cent. emulsion of creoline of about body heat.

Great caution should be used in injecting cases where there is an internal fistula, as it often sets up very troublesome attacks of coughing.

Shock.

Shock must not be forgotten, and it must be borne in mind that the patient often loses a large amount of blood during the opening of an empyema, from the granulations lining the cavity which are suddenly released from the pressure to which they have been subjected. I know of no means of controlling this hæmorrhage, nor of guessing in which cases it is likely to happen; the amount is often quite difficult to estimate, because the blood runs into the pleura. I am convinced that it is the main factor in producing the shock, which is sometimes very severe, and which makes it essential that the patient should be carefully watched for a good many hours after the operation, and, if necessary, helped over the dangerous period by stimulants.

This bleeding is, of course, similar to that which follows

the opening of tightly distended abscesses with highly vascular walls, which, as is well known, may sometimes be very serious. I have known death from this cause follow the mere opening of an enormous psoas abscess in a delicate girl, and I can imagine that in such cases it might sometimes be wise to resort to transfusion.

Secondary Hæmorrhage,

presumably from the intercostal artery, occurred in one of my cases some years ago. It was a very septic one, and I had removed a piece of rib, thus leaving the vessel unprotected from any ulceration that might be caused by the drainage tube. In a similar case, now, I should cut the artery across, and tie it at the time of the operation.

Cerebral Abscess.

Cerebral abscess is a not uncommon complication of empyema and pulmonary abscess. I will give the salient points of a few cases in my own practice.

CASE I.—A lady, aged about 30, had a left empyema imperfectly opened in the spring of 1891; she was taken with a rigor in Switzerland in September, and came under my care in October, 1891; she was at that time complaining of a stiff neck and other unexplained symptoms. I opened the pleura freely, and inserted a large tube on October 13. After a very few days the symptoms of an abscess in the left motor area declared themselves, and on October 23 I trephined and evacuated a small amount of pus, but she died on October 29 unrelieved.

CASE II.—A lady, aged about 40, had suffered from a right empyema, which she was expectorating. It was of very long duration, and was supposed to have dated from the swallowing of a plum stone. I opened it on July 14, 1890, and she improved greatly, but did not cease expectorating. No further operation was done. In January, 1891, she manifested symptoms of an abscess in the left cerebral hemisphere. On January 30, I trephined over the motor area, but did not hit on the abscess, which was in the left occipital lobe, although the localizing symptoms appeared to be remarkably definite.

CASE III.—A woman, aged 34, had a left basic tuberculosis cavity and a left empyema outside it, the latter opening by several sinuses around the left breast. She had become melancholic since the bursting of the abscess. I opened it freely behind, about May 7. On May 23 an abscess in the left corpus striatum burst into the ventricle, and rapidly caused death.

CASE IV.—A man, aged 36, died last year in University College Hospital, with two abscesses, one in the right ascending parietal region, which Mr. Pollard opened, and one a little further back, which was unrelieved. He had been under my care, and that of many of my colleagues, for ten years or more, and we had performed numerous operations for the relief of empyema. Latterly he had been his own attendant, and had let some half-dozen drainage tubes slip into his chest.

I might record other cases, but these are enough to show that the abscesses do not necessarily follow soon after an operation on the ribs, and practically may be quite independent of surgical interference; that neither side is specially affected; and that the abscess may occur in any part of the brain. Why abscess of the brain should be specially liable to follow suppuration in the chest—I think it must be allowed that such is the case—I can not tell. It is certainly not always because the blood is being returned by the pulmonary veins, for in many cases there is no pulmonary abscess, and then blood is being returned by the azygos veins, which, as far as the brain is concerned, are in the same position as any other systemic veins. I have only in one instance met with metastatic abscesses elsewhere.

Prolonged Retention of Drainage Tube.

It is wonderful, by the way, how long a patient may exist with a drainage tube or similar foreign body in his chest; it is even possible that the wound may heal up over it and remain closed for months at a time. I have seen this happen with a tube, a piece of necrosed rib, and a bullet; the last, however, lay in a minute cavity which communicated with a bronchus, and—whether as a result of this or not I can not say—the patient developed tubercle and ultimately died. What I have said, however, furnishes no excuse for not making an attempt at the removal of a drainage tube from the pleura; it will probably be found quite easily, if not directly below the external opening, then at the posterior part of the pleural cavity. If, therefore, the tube have slipped in through an anterior opening, it may be necessary to make a posterior incision for its removal, but the original opening should first be freely enlarged.

Amyloid Degeneration and Clubbed Fingers.

These conditions are often met with in old running empyemata, but they are not more common than in chronic phthisis and bronchiectasis. It is interesting to know that, even although well marked, these symptoms may completely clear up if efficient drainage leads to closure of the cavity. It is also

an instructive fact that a patient may go on for years with a discharging empyema and yet show but slight signs of amyloid disease. I have a man under observation with a very small cavity, which he stoutly refuses to have operated upon, resulting from an empyema which I opened as long ago as 1876, but he continues to work as a costermonger and is in very good health. His fingers certainly are slightly clubbed and there is slight albuminuria, but he changes very little from year to year, though the discharge from the pleura is fairly free and very offensive.

TUMORS.

Cancer of the lung or pleura may give rise to serous effusion, either clear or bloody (I have seen both in the same individual), or to an empyema, but I have not seen the latter arise before the pleural cavity had been aspirated. I have also seen cancer of the lung give rise to a pneumothorax, which rendered still more difficult the diagnosis of an already obscure case. Whatever the nature of the effusion may be, I believe it is wisest to avoid a free opening as long as possible, but sometimes this can not be done. I have never seen the incision close where there was malignant disease of the lung or pleura. Amongst a good many cases of cancer of the lung or mediastinum, I have never yet met with one that at all suggested the possibility of removal by operation. Such operations have, however, been suggested, but the circumstances under which there can be even a chance of success must be exceedingly rare; and thus—although, in animals, portions of lung may be ligatured off and removed without producing any very serious symptoms—I do not think that this is at all a promising branch of surgery.

I regret that I can give you no personal experience of operations on tumors of the thoracic walls. They are of three sorts: 1. Enchondromata of ribs or rib cartilages. 2. Primary malignant growths of ribs or neighboring structures, probably always sarcomatous. 3. Secondary malignant growths. The last are frequently met with after scirrhus of the breast, and occasionally after malignant disease elsewhere. It may surely be described as meddlesome surgery to interfere with these. The lymphatics of the chest wall pass into the mediastinal or sternal glands, and are almost certain to be affected before the growth in the chest wall is apparent. I do not mean to say that if, in removing a scirrhus, the intercostal muscles should be found to be involved, the affected part should not be taken away if possible; but all will acknowledge that, under these circumstances, the prognosis is almost certain and bad.

Primary sarcomatous growths of the chest walls have not infrequently been removed, and with some amount of success; but the operation is a formidable one if the growth be large, and has not seldom proved fatal. The mere opening of the pleura on one side need not deter the surgeon from operating.

Exostoses of ribs and rib cartilages are not common, and are often of excessively slow growth. They should therefore always be watched for a time before an operation for their removal be attempted. And this is all the more advisable because there are certain things that are liable to be mistaken for this disease; for example, an accessory or cervical rib, and the deformity of an otherwise normal rib. I have cut down on one of these deformed ribs, and have twice successfully removed accessory ribs. This is an operation that presents no very great difficulty, and may occasionally relieve very distressing nervous symptoms.

PULMONARY ABSCESSSES.

It is necessary to say a few words about pulmonary abscesses, but I feel I have not much to add to the somewhat full discussion of the subject in my lectures at Brompton some years ago.* The cases that have occurred since that time have not been many, and, I am bound to add, not very successful. It may seem strange that the greater number of pulmonary abscesses that are submitted to me are bronchiectases; and yet bronchiectasis is supposed to be a somewhat rare disease. I have operated on a good number of them, but only one has been cured—the case reported by Dr. Theodore Williams and myself in the *Transactions of the Royal Medical and Surgical Society for 1886*, Vol. LXIX, p. 317. This patient died of cardiac syncope last year, and *post mortem* we found a shrunken cavity communicating by numerous openings with dilated bronchi. It had long ceased to secrete. But the others have nearly all followed the same unfavorable course. If anything has been opened it has been a smooth-walled fusiform cavity; the expectoration has been at once much diminished and becomes less offensive, and the patient has improved in general condition up to a certain point—but only up to a certain point. Then matters have become stationary, and then something has happened; hæmorrhage, cerebral abscess, or some other intercurrent disease, or, at best, the tube has been retained, and the patient has continued to get rid of his secretions by the artificial opening as well as the mouth.

Let me emphasize two dangers in dealing with any pulmonary abscess, but especially a bronchiectatic one, both depend-

* *Lancet*, 1887, Vol. I.

ing upon the facts, first, that it is impossible to diagnose with certainty the presence or absence of pleural adhesions, and, secondly, that in cases of bronchiectasis it is not uncommon to find a normal pleura over that part of the lung in which the physical signs of cavity are well marked. The dangers, then, are these: 1. Simple puncture of a lung containing a septic abscess may, and often has, given rise to septic inflammation of the pleura, even though no pus has been extracted through it. I have seen it in a case of bronchiectasis, and also in one of septic pneumonia following aneurism of the aorta. In both empyema was the result. 2. A healthy pleura may be met with after the exploring needle has struck pus, under which circumstances the lung will probably fall away, and all the indications of the position of the abscess would be lost. Of course, we must explore these abscesses before attempting to open them; and so risk No. 1 must be run. It is minimized by always employing an exhausting syringe or aspirator, and not a simple exploring trocar. Risk No. 2 may be avoided by taking care not to injure the pleura in the preliminary incisions and removal of rib. Then, with a Hagedorn's needle of full curve, a single or double series of stitches should be placed deeply ($\frac{1}{2}$ -inch to $\frac{3}{4}$ -inch through the pleura in the place where the lung is supposed to be. If the pleura be healthy and the lung in contact with the chest wall, the desired object will be attained; if the pleura be adherent no harm will have been done; and if, as sometimes happens, there is a small effusion no good may result, but the surgeon will feel that, according to our present lights, he has done his best.

Basic cavities, whether tuberculous or the result of pneumonia, are far the most favorable for operation, but they are not very frequently met with; single tuberculous basic cavities are certainly very rare.

I will not myself dwell upon the question of the incision of tuberculous apex cavities, because I have no personal experience of the matter. This, I suppose, is because my colleagues at Brompton, at all events, do not anticipate much good from this line of treatment. I expect that some surgeons here will be able to give us the benefit of their experience, though I can not, after searching such current literature of the last ten years as I could lay my hands on, find anything worth bringing before you. And, so far as I can discover, the result of the operation, when it has been performed, has not been very satisfactory. It has always seemed to me, however, to be legitimate surgery to drain a single large apex cavity if the other lung be healthy, because it ought at least to diminish expectation, and thus free the better lung from a certain amount

of danger; but then, unfortunately, cases answering to this description are not met with every day.

DIFFICULTIES IN DIAGNOSIS.

Perhaps it may not be inappropriate, in conclusion, to mention a few cases of difficult diagnosis that have occurred to me—not in detail, though I should be happy to supply particulars if any should be asked for.

Pyopericardium.

CASE V.—Male, aged 24. Left empyema, and copious purulent expectoration. Incision of the pleura September 3, 1887. A soft round substance felt with the finger and mistaken for lung. The symptoms improved, but the expectoration continued, and death occurred on September 25. *Post mortem* it was found that the smooth round substance was the pericardium, distended by a large quantity of pus, which the patient was no doubt expectorating, though the actual communication with the lung could not be found. The empyema opened into the lower part of the lung, which contained bronchiectatic cavities.

Had the diagnosis have been made correctly it would no doubt have been possible to drain the pericardium through the pleural opening, following the example of Sir William Savory.†

Uncomplicated pyopericardium should, I think, be treated by free incision and drainage, the fifth interspace near the sternum being probably the most convenient position for the incision. It must not be forgotten that the pleuræ are symmetrical behind the sternum and rib cartilages on the two sides—that is, that the pleura does not follow the outline of the notch in the left lung. Care must, therefore, be taken that the pus from the pericardium be not admitted to a healthy pleura, which can be done by incising *gradatim*, and, if necessary, stitching the pericardium to the costal pleura.

The fifth interspace on the left side is not the only spot which may be chosen for puncturing the pericardium. The sixth interspace and the fourth have been selected; the sternum has been trephined, or a puncture has been made through the fifth interspace on the right side, or into the lower surface of the pericardium, through the epigastrium. The internal mammary artery is very close to the edge of the sternum at the lower part, and it would be very likely to be injured in puncturing close to this bone. It has been asserted that there is no spot at which one can be certain to avoid puncturing the pleura (except by going through the sternum), and considering the

† *Med. Chir. Trans.*, Vol. LXVI, p. 235.

variations in the extent of the pleura, this is probably true. On the other hand, it has been said that the pleuræ are pushed aside by the distended pericardium; but Pirogoff's frozen sections of the bodies of patients dying with pericardial effusion do not support this view, nor do one or two observations of my own, in which the pericardium was injected with gelatine. When the needle has entered the pericardium it should not be pushed far backward, lest it should wound the heart, which occupies the upper and anterior part of the distended pericardium.

Embolism.

CASE VI.—A girl, aged 12, who had been a patient at University College Hospital since 1884, at various times, with heart disease and bronchitis was admitted April 27, 1887, with obscure cardiac symptoms and a sanguineous effusion in the left pleura, which was tapped. In July she was readmitted with left empyema, which was opened on August 17. There was much collapse next day, and in the evening there occurred embolism in the renal, splenic and both femoral arteries. Both legs passed into a state of gangrene, and half the spleen sloughed and lay loose in an abscess which burst into the stomach. She lived forty days after the operation, and *post mortem* it was found that there was an abscess in the heart substance and pericardium.

Subdiaphragmatic Collections of Fluid.

CASE VII.—A woman, aged 30, had an incision in the right side of the chest, by means of which a drainage tube had been introduced through the ninth intercostal space; but it was, when I saw her, lying outside the ribs. There was a large, round, obviously hepatic swelling in the abdomen. The patient was greatly emaciated. On following the tract down between the ribs, it was found to enter an enormous hydatid cyst of the liver, which had pushed the diaphragm up so high that dullness in front existed as far as the second cartilage.

This might serve as a text for the discussion of a large class of cases in which a collection of matter beneath the diaphragm simulates empyema. I could mention several of tropical abscess of the liver, with great enlargement upward, in one of which the matter had burst between the liver and the diaphragm, and formed a large collection there; in another I opened the healthy pleura on the way down to an abscess that had burst from the upper part of the liver into the lung.

Peritoneal Suppuration.

I have also opened a collection of pus starting from suppuration about the appendix through, I think, the sixth right.

space in the axilla, but whether below or above the diaphragm I was never able, with certainty, to determine. And similarly confusing cases are those of localized peritoneal sup-puration starting from a ruptured intestine, which may push the diaphragm up to a quite unexpected height. These cases are sometimes rendered doubly confusing because they may contain gas; a fact which has originated the almost ridiculous name of "subdiaphragmatic pneumothorax." Ulcer of the stomach, the duodenum, and the transverse colon are most likely to give rise to this sort of abscess. It may occur on either side.

Dermoid Cyst.

CASE VIII.—A woman, aged 30, had an apparently ordinary right empyema, of eight years' duration, which communicated with a bronchus. On opening it, a soft, firm mass was to be felt, which, at the time, was quite inexplicable, but which, at the second operation, turned out to be a mass of hair which had grown from the interior of a huge dermoid cyst that had long ago ruptured into the pleura. I described the case in the *Transactions of the Medical and Chirurgical Society*. After living for four years, she died at last of blood poisoning.

Peculiar Discharge from the Mediastinum.

CASE IX.—A man, aged 21, was seized, in January, 1891, with dyspnœa, followed at an early date by some expectoration. He partially recovered from this attack. Three weeks after the onset his left pleura was punctured, and some thick yellow fluid drawn off. On admission he had a round swelling at the epigastrium, to which the pulsations of the heart were forcibly transmitted. After several aspirations of the pleura, as no change took place in the epigastric swelling, I cut down carefully upon it and let out a quantity of thick brown fluid, amongst which was a large number of small rounded knobby masses of a material the color and consistence of the yellow palm oil used for lubricating the wheels of railway carriages. It evidently came from some deep part of the mediastinum, and on another occasion I trephined the middle of the sternum, and went in search of it; but turned back when I found my finger at the base of the heart and amongst the great vessels there. I shall be indeed grateful if any one can aid me by reference to such another case.

And so this disjointed paper must stop, without ending; I have only touched on a very few of the subjects which might fairly have been introduced; partly from lack of time, but chiefly because it does not seem worth while to enter into the-

oretical discussions about matters with which one has little or no practical acquaintance. There are interesting subjects, such as mediastinitis, with which I am unacquainted, except as the sequence of wounds in the neck; peripleuritis, which I have only met with in caries of ribs; and all the wide question of thoracic injuries, about which volumes have been written, and on which, I hope, no one will feel himself debarred from speaking because I have omitted them. I can only apologize for my own imperfections, and trust that they may be counteracted by the debate which is to follow.

Mr. Pearce Gould agreed with Mr. Godlee as to the advantages of the posterior position for opening, and that a portion of rib should always be removed. He, however, advocated irrigation of the pleural cavity in all cases. A stream of warm antiseptic fluid should be allowed to flow in gently and out again until it returned clear. An endeavor should be made to leave the pleural cavity as clean and dry as possible. Subsequent irrigation should be avoided. The length of tube should be sufficient to reach the pleural cavity, not longer. There should be no lateral openings, and a rigid tube was to be preferred for three or four days, as it left a better sinus. With respect to double empyema, he agreed with the previous speaker that the second opening should be delayed, but only for a short time, a few days being sufficient. He thought the distinction often drawn between local and general empyema was misleading, as in no case was an empyema total, but there was every grade of case between a dry small local collection and the most extensive effusion.

Dr. Newman related a case of empyema with a fatal issue due to irrigation, which he believed to be due to the impact of the stream of fluid on the pleural surface of the pericardium; also another case which terminated successfully after the evacuation of 13 pints of fluid from the pleura. There was no removal of the ribs at the time or subsequently, yet very marked shrinking and falling in of this side of the chest had followed. He related two cases of empyema in which spontaneous cure had resulted; both cases in children, that is, under 16 years of age; both ending in definite pus collection outside the chest wall. Absolute recovery ensued after free incision. He called attention to the difficulty of determining by auscultation the conditions of an empyema. He raised the question whether respiratory murmurs might not be transmitted from the unaffected side.

Mr. Jordan Lloyd expressed the opinion that in dealing with an empyema the most important practical question was to determine whether the empyema was simple or constitu-

tional—that is, tuberculous, for the reason that the former usually recovered after simple free incision and the latter did not. The early diagnosis of fluid in the chest was nowadays a matter of absolute simplicity, for if a chest was dull on percussion and the local fremitus was diminished fluid ought to be present, and, if there was any doubt in the matter, a clean hypodermic needle would settle the question in a few moments. Empyemata were even now not infrequently overlooked, and deaths from this condition were put down to other causes. With respect to the incision, he had tried all varieties, and believed that the lateral incision gave as good results as any other. Freedom of drainage might be secured by extending the incision along the intercostal space for two or three inches. He believed in the existence of local empyemata, and that, as a rule, they were tuberculous. Such cases should be diagnosed early and at the time when they were local, for then their treatment by free removal of all tuberculous matter by free operation might be followed by a satisfactory result. He objected to irrigation as a routine practice as being “meddlesome” and unnecessary, but in stinking septic cases irrigation might be practised with advantage.

Mr. Charters Symonds agreed with Mr. Jordan Lloyd that the operation of opening an empyema should be as simple as possible, for treated thus the majority recovered. He never removed a piece of rib unless there was insufficient room for a good-sized tube. He did not irrigate nor take the trouble to remove the lymph, and the cases did as well as those in which there was no lymph. If there was any cardiac difficulty, he suggested that sufficient fluid should be removed by the aspirator to relieve the distress before chloroform was administered. In some cases he had encountered lung and had torn it—without, happily, any evil result—by passing a needle either up or down and finding the pus, the adhesion usually being small. He thought the action of the physician in the present day in needling all doubtful cases, and thus bringing the empyema under surgical treatment early, had as much effect in determining the good results as the action of the surgeon. He called attention to the condition of the pleura after drainage in cases in which a probe could be put in for 6 to 8 inches, and yet complete recovery occurred without resection of ribs. In double empyema he would incise one side and relieve the other by aspiration temporarily, subsequently incising. If in a case after incision there was hectic temperature, he suspected pus in the opposite pleura. Hæmorrhage was so rare that he thought when it did occur that it was probably from ulcerating pulmonary tissue and not from granulation tissue. He asked

Mr. Godlee how he dealt with a pulmonary cavity when the pleura was not adherent. He had, in two cases, not found the lung collapse on opening the healthy pleura.

Dr. Ward Cousins thought that in cases of tuberculous empyemata more harm than good was often done by operation. The opening of local empyemata through the lung was by no means an unfavorable means of exit. When the collection was large and fetid it should be evacuated. Irrigation of the chest should be avoided except in fetid cases. Aspiration in children he considered a very successful method of treatment. He recommended opening the chest by first of all puncturing with a trocar, which was turned into a knife, and free incision made from within outward. He thought that very few of the cases in which free rib excision had been practised had come to a successful termination. He always practised free incision, and when necessary, excised a portion of a rib to assist exploration and drainage, but the best results in his practice had certainly followed free incision only. The deep incision must be free, and success depended upon early operation. He thought operations upon the pericardium were not attended with very great danger. The indications were the amount and character of the effusion. The best instrument was a fine trocar, in which the point could be protected.

Although the fifth intercostal space near the sternum had been generally recommended, the exact spot was always a matter of selection after careful examination. The emptying of the sac should be only partial, and as soon as the dyspnoea appeared relieved, the evacuation should be stopped. The patient should be, as nearly as possible, in the recumbent position, but this was sometimes quite impossible from extreme dyspnoea. The physical signs of most value were the spreading and increase of the pericardial dullness and its shape. The presence of an effusion in the left pleural cavity added difficulty to the diagnosis, and when the heart sounds were not clear on the right side, and the epigastric region was full, it was highly probable that the case was complex. The cardiac sounds were generally weak, and there was a disproportion between them and the force of pulse. These were the signs which had especially guided him in two cases in which he had operated, in one successfully.

Dr. Thomas Eastes observed that cases of subdiaphragmatic abscess might be difficult to diagnose when the accumulation was great, and reached high posteriorly; the rising and falling of the lowest limit of resonance on deep expiration and inspiration might generally be taken as a proof that the fluid was below the diaphragm, but there might be pleuritic effusion

as well. In these cases he thought it wiser to aspirate the pleuritic fluid first, and after a day or two to incise the thorax, sew the diaphragmatic to the parietal pleura, incise the diaphragm, and put in a sufficiently large drain.

If the whole operation was done at one stage there was more risk of the pleuritic effusion becoming purulent. One other point, which, though a simple matter, might save a life now and then, was exemplified in a case of Mr. Jacobson's related in the *British Medical Journal* of July 23, 1892, p. 178. It was the use of a small stream of oxygen into the inhaler in cases of great dyspnœa where there seemed a probability that the result might otherwise be fatal.

Mr. J. R. Ratcliffe insisted on the advisability of always treating each case individually, and of defining the limits of the empyema by means of a needle instead of by percussion alone. In support of this he drew the attention to the obliteration of the lowest limit of the pleural cavity by adhesions. He said that in most cases of empyema the lowest limits of the pleural cavity were much higher than usual, on account of adhesions between the diaphragm and the costal pleura, and mentioned two cases. In the first this obliteration had gone on as high as the level of the seventh rib in the mid-axillary line, and in the other as far as the eighth. In the first the opening had been made in the post-scapular line, and had opened into adhesions; and in the second between the ninth and tenth ribs, and the spleen had been incised. He insisted that the incision should be made along the track of the exploring needle which had found pus.

Mr. Mayo Robson said that in empyema what was really to be aimed at was a free opening and free drainage. He discussed the question as to what was to be done when the patient appeared to be too ill to have an anæsthetic administered. He advocated the use of cocaine. With respect to the resection of ribs, he stated that the rule at the Leeds Infirmary was not to excise. It prolonged the operation, and offered no advantages over the simpler method. Washing out of the cavity was a practice he could not recommend. Where an empyema had gone on for a long time, excision of the ribs was sometimes necessary. He had performed an operation of this sort lately, removing portions of eight ribs, including the second. The patient made a good recovery. With respect to cases of tuberculous pleurisy, it had occurred to him that it might be advisable to adopt the same method that was adopted in cases of tuberculous peritonitis—that is, to drain the pleura, after finding that simple aspiration and the usual medical treatment did not prevent the fluid recurring.

Mr. Godlee, in reply, said that he would not venture to discuss the question of physical signs, but was strongly in favor of the use of the exploring trocar if there were any reasonable suspicion of pus in the chest, and of not trusting to the stethoscope. He believed that serous effusions were much more frequently tuberculous than empyemata, and that tuberculous empyemata were more frequently complete than localized. He thought drainage of tuberculous pleurisy by free incision would be a very dangerous proceeding.

No doubt the lung would fall away, for such falling away did undoubtedly occur when the pleura was freely incised if the lung were healthy; this assertion he had demonstrated by some experiments on animals and observations on cases. He thought that the distinction between complete and localized empyemata was an important practical one, because the opening of a localized case interfered very slightly with the function of the lung, and because in these cases the prognosis was much more favorable than when the whole cavity was involved. He remarked that the hæmorrhage referred to in the paper did not appear to come from the lung, as no hæmoptysis accompanied the operation. If the case was too ill to bear an anæsthetic because the amount of fluid was so large, he would follow the plan suggested in the paper; if from other causes he would, personally, operate without an anæsthetic, being rather shy of injecting cocaine in a person who was very much exhausted. He observed that a great many operations for which it was the custom to give an anæsthetic were really quite well borne without it, and especially mentioned a case of ligature of the femoral artery and one of strangulated umbilical hernia. —*Br. Med. Journal.*

THE PARASITE ORIGIN OF CANCER.

In the August number of the *Annales de l'Institut Pasteur* M. J. Soudakewitch continues his account of his observations on intra-cellular parasitism in cancerous new growths. He strongly combats the idea brought forward by Professor Virchow that the parasites described by recent observers have little to do with the etiology of cancer. He still maintains that the structures he describes in the cancer cells are true parasites; that by certain features they may be distinguished from various degenerated products and altered cells; he has now been able to see falciform bodies within these parasitic cysts. He has noted the division of the body into a larger number of smaller bodies, and he has found these smaller bodies increasing in

size, ultimately forming groups of the larger organisms contained in a large mass of protoplasm. In the one hundred and ten cases he has now examined he has always obtained the same results. He thinks that the young parasite passes into the substance of the cell; that there it grows slowly; that the capsule that surrounds it becomes more and more marked; that the nucleus is gradually compressed until it takes the form of a flattened layer around the capsule, to which it is closely applied; the protoplasm of the cell is also gradually distended, becomes more homogeneous, is not so brilliantly stained, and ultimately may form only a thin membrane around the parasite.

The parasite is then set free, its contents become divided into what may be termed "spores," and these make their way into the neighboring cells, when the process recommences, so that a single cancer-cell may give rise to the contamination of a considerable number of those cells around it. He also holds, however, that the cell containing the cancer parasite may divide, and that the parasite may divide along with it, both of the resulting cells being thus infested. He does not, however, seem to take into account that these parasites as they grow must give off effete matter, which probably may have a most important influence in determining the proliferation of the epithelial cells in the immediate neighborhood, and that therefore it is not to be expected that one of these parasites would be found in every cancer-cell. These and other recent observations on cancer open up a new line of research, and one that promises to give us some new light on the etiology of this fell disease.

Book Reviews and Notices.

A Pocket Medical Dictionary, giving the pronunciation and definition of about 12,000 of the principal words used in medicine and the collateral sciences. By Geo. M. Gould, A.M., M.D. Philadelphia: P. Blakiston, Son & Co., 1892.

Dr. Gould has already shown his hand as a maker of good books, and the effort before us is but a condensation of an excellent dictionary that has already found favor among

medical men. The *pocket medical dictionary* is a hand-book, soft, flexible, durable, with gilt edges and fair to gaze upon. The merits of the book are not all on the outside, for the inside contains good definitions of a more extensive vocabulary than the average medical man uses.

A Practical Treatise on Diseases of the Skin. By John V. Shoemaker, A. M., M. D., Professor of Skin and Venereal Diseases in the Medico-Chirurgical College and Hospital of Philadelphia; Physician to the Philadelphia Hospital for Diseases of the Skin; Member of the American Medical Association, of the Pennsylvania and Minnesota State Medical Societies, of the American Academy of Medicine, and of the British Medical Association; Fellow of the Medical Society of London. Second edition, revised and enlarged, with chromogravure plates and other illustrations. New York: D. Appleton & Co., 1892. New Orleans: Armand Hawkins. Price \$5.

We take pleasure in pronouncing the second edition of Dr. Shoemaker's treatise a decided improvement on the first. This is noticeable not only in the additions which bring the pathology and treatment up to date, but in many minor but wise additions that give greater completeness to the text. The illustrations of the second edition have not that cheap-chromo appearance that characterized those of the first, and serve better to illustrate the disease depicted. We regret that the author has seen fit to exclude the illustration of *vitiligo* of his first edition, which we considered the best representation of this disease that we had seen.

The frontispiece of the new edition is a good illustration of psoriasis, and the figure of a leprous child gives an excellent idea of tubercular form of this disease as it is commonly met with.

A feature of the work that recommends it to the specialist and general practitioner is one which makes it, perhaps, objectionable to the under-graduate student—its fullness.

The work, however, without being exhaustive, is an illustration of the immense strides the science of dermatology has made of late years.

The demands of a practical generation are met almost too well by a large number of prescriptions after each article, and a formulary of 104 pages at the end of the book. This is the only portion of the work in which discreet clipping might be advisable.

Taken as a whole the work is good, practical and reliable,

and we recommend it to all general practitioners who would obtain the latest information upon things dermatological.

H. W. B.

The *Medical News Visiting List for 1893* is again presented to the busy physician as a handy record of his daily toil. The *Visiting List* contains some features besides merely registering the number of visits made, etc.; it contains notes on dentition, day of confinement, thermometric scales, weights and measures, metric system, examination of urine, artificial respiration, poisons and antidotes, tables of doses, several pages of résumé of therapeutic hints, and a section on the ligation of the more important arteries. The whole has a patent index, which enables one to find in an instant the subject that he is looking for. [Philadelphia, Lea Bros. & Co.]

The *Physician's Pocket Day Book*, designed by C. Henri Leonard, M. D., is good for thirteen months, and can accommodate daily charges for twenty-five or fifty families a week. The record can begin at any time. [Detroit: Illustrated Medical Journal Company.]

The *Weekly Medical Review Pocket Reference Book and Visiting List* is perpetual, and is adapted to any year. It contains notes on examination of urine, date of confinement, tables of doses, etc., and fulfils all the requirements of a good record of professional work done. [St. Louis: J. H. Chambers & Co.]

The *American Text Book of Surgery*, edited by Professors Keen and White, of Philadelphia, which has only been issued a few months, is already a phenomenal success. It has been adopted as a "Text Book" by forty-nine of our leading medical colleges and universities. Nearly five thousand copies have been placed in physicians' libraries, and every indication points to a sale of at least as many copies more in the next six months.

Dr. Nicholas Senn, of Chicago, is now preparing a *Syllabus of Lectures on the Practice of Surgery*, arranged in conformity with the *American Text Book of Surgery*, which will be a valuable aid to all who have this great book.

MORTUARY REPORT OF NEW ORLEANS.

FOR OCTOBER, 1892.

CAUSE.	White	Colored...	Male.....	Female...	Adults ...	Children.	Total
Fever, Yellow							
“ Malarial (unclassified)....	12	8	10	10	18	2	20
“ Intermittent							
“ Remittent	5	5	3	7	7	3	10
“ Congestive.....	2	4	3	3	2	4	6
“ Typho	6	3	6	3	6	3	9
“ Typhoid or Enteric.....	1	1	1	1	2		2
“ Puerperal	2	1		3	3		3
Influenza.....							
Scarlatina							
Measles							
Diphtheria	5	2	1	6		7	7
Whooping Cough	2	1	1	2		3	3
Meningitis	7	4	7	4	8	3	11
Pneumonia.....	15	16	15	16	16	15	31
Bronchitis	7	7	8	6	7	7	14
Consumption	43	41	49	35	82	2	84
Cancer	8	4	4	8	12		12
Congestion of Brain.....	4	1	3	2	2	3	5
Bright's Disease (Nephritis)	17	12	11	18	29		29
Diarrhœa (Enteritis)	22	8	14	16	15	15	30
Cholera Infantum	6	3	6	3		9	9
Dysentery.....	3	3	4	2	6		6
Debility, General	4	3	2	5	7		7
“ Senile	21	10	12	19	31		31
“ Infantile	4	1	3	2		5	5
All other causes	184	80	144	120	168	96	264
TOTAL	380	218	307	291	421	177	598

Still-born Children—White, 28; colored, 19; total, 47.

Population of City—White, 184,500; colored, 69,500; total, 254,000.

Death Rate per 1000 per annum for month—White, 24.71; colored, 37.64; total, 28.25.

F. W. PARHAM, M. D.,
Chief Sanitary Inspector

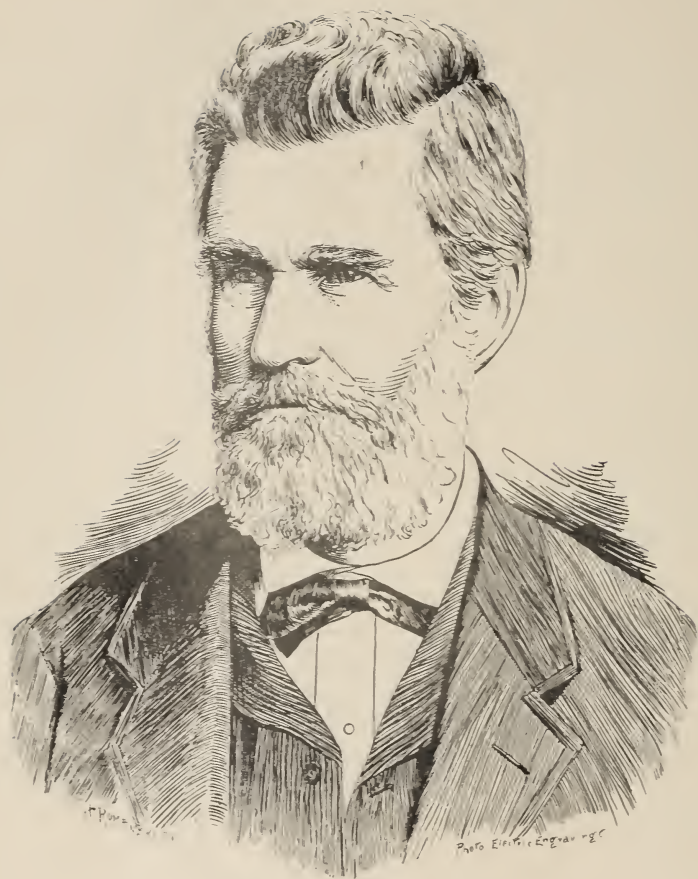
METEOROLOGICAL SUMMARY—SEPTEMBER.

STATION—NEW ORLEANS.

Date.....	TEMPERATURE.			Precipn. in inches and hundredths ..	SUMMARY.
	Mean	Max.	Min.		
1	74	79	70	.03	Mean barometer, 30.053.
2	76	84	69	0	Highest barometer, 30.305, 30th.
3	77	84	70	0	Lowest barometer, 29.789, 23d.
4	76	83	70	0	Mean temperature, 71.0.
5	76	85	68	0	Highest temp., 87, 8th; lowest, 48, 27th.
6	75	81	69	0	Greatest daily range of temperature, 21, 29th.
7	74	82	66	0	Least daily range of temperature, 6, 22d.
8	76	87	66	0	MEAN TEMPERATURE FOR THIS MONTH IN—
9	65	73	57	0	1871..... 71.0 1877..... 70.0 1883..... 75.0 1889..... 70.0
10	65	74	58	0	1872..... 68.0 1878..... 71.0 1884..... 74.0 1890..... 69.0
11	70	78	63	0	1873..... 68.0 1879..... 72.0 1885..... 66.0 1891..... 68.0
12	74	79	69	0	1874..... 70.0 1880..... 65.0 1886..... 70.0 1892.....
13	74	80	69	.18	1875..... 67.0 1881..... 75.0 1887..... 68.0
14	76	80	72	.01	1876..... 67.0 1882..... 73.0 1888..... 68.0
15	76	80	72	T.	Total excess in temp'ture during month, 6.
16	78	83	72	0	Total excess in temp'ture since Jan. 1, 418.
17	76	82	69	0	Prevailing direction of wind, N. E.
18	75	82	68	0	Total movement of wind, 7155 miles.
19	74	80	69	0	*Maximum velocity of wind, direction and date,
20	76	83	68	0	50 miles, from N. E., 23d.
21	74	80	69	0	Total precipitation, 2.14 inches.
22	72	75	69	.49	Number of days on which .01 inch or more of
23	68	72	64	1.39	precipitation fell, 6.
24	69	72	66	0	TOTAL PRECIPITATION (IN INCHES AND HUNDREDTHS)
25	58	63	52	0	FOR THIS MONTH IN—
26	56	63	49	0	1871..... 0.09 1877..... 9.15 1883..... 3.43 1889..... 0.26
27	56	63	48	.04	1872..... 3.18 1878..... 5.07 1884..... 5.60 1890..... 5.24
28	60	69	50	0	1873..... 1.89 1879..... 1.36 1885..... 0.56 1891..... 2.38
29	66	76	55	0	1874..... 0.00 1880..... 1.83 1886..... 0.22 1892.....
30	66	74	59	0	1875..... 2.09 1881..... 4.84 1887..... 4.71
31	71	80	62	.0	1876..... 0.24 1882..... 2.16 1888..... 7.36
					Total excess in precipitation during month, 1.28.
					Total excess in precip'n since Jan. 1, 3.84.
					Number of cloudless days, 22; partly cloudy
					days, 4; cloudy days, 5.
					Dates of frost, —.
					Mean maximum temperature, 83.
					Mean minimum temperature, 70.

NOTE.—Barometer reduced to sea level. The T indicates trace of precipitation.
To be taken from any five-minute record.

G. E. HUNT, *Local Forecast Official.*



RICHARD HANCE DAY.

Born in Baltimore, Md. June 9, 1813. Died in Baton Rouge, La., December 4, 1890.

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

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Original Articles.

[No paper published or to be published in any other medical journal will be accepted for this department. All paper must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

BIOGRAPHICAL SKETCH OF DR. RICHARD HANCE DAY.

By DR. JAS. W. DUPREE, OF BATON ROUGE.*

“There is no death. The stars go down
To rise upon some fairer shore,
Where, bright in heaven’s jeweled crown,
They shine forever more.”

On the 4th day of December, 1892, after a short illness, all his record made up, every trust discharged, his last account balanced, with an abiding faith in the justice and mercy of the Great Giver of Life, under whose fiat body and soul must part, with his hand affectionately clasped by the most devoted of wives, and surrounded by loving children and devoted friends, Richard Hance Day, without a pang, passed to his eternal rest.

On that day a clean souled, strong minded, grand old man, who had almost reached the eightieth mile-stone on life’s journey, “folded the drapery of his couch about him and lay down to sweet repose.” May his head be as softly pillowed in eternity.

“Between the extreme of admiration and of malice,” says Dryden, “it is hard to judge rightly of the living. Friendship and hatred alike bind us in deciding upon the merits of our

* Read before the Baton Rouge Medical Association.

contemporaries ; we are either bribed by interest, or prejudiced by malice." Harder still the task to do justice to the affectionate remembrances which whisper the o'er-fraught heart as we contemplate the character and deeds of a beloved and departed friend, and yet speak of him in that measured phrase which the truth he prized beyond all things earthly demands ; hence I approach the task with the utmost diffidence and in an absolute sense of insufficiency. However, I am encouraged to proceed by the hope that many of you may be led by this flash-light account of him and of his works, with which, on this occasion, I must be content, to contemplate more earnestly his character and to study more attentively his writings, and that it may ultimately result in the writing of a biography of our deceased fellow commensurate with his greatness by an abler but not more devoted pen than mine.

He was born at Bladensburg, Maryland, June 9th, 1813, and consequently, at his death, was nearly 80 years of age. Of his early education, let him speak ; in his address as president of the Louisiana Medical Society in 1885 in discussing the prerequisites for the study of medicine, among others, he declared that " a thorough literary education is demanded," and added, " If you will pardon me for a personal reference, I beg to state that I speak feelingly on the subject, since circumstances placed me in the profession of medicine without this essential qualification.

" I have loved the profession of medicine as ardently as others have loved it ; loved it as a science ; for the mental gratification it affords, and loved it for the good it was capable of doing to my suffering fellow men ; but, in all this more than fifty years that I have been trying to work out its mission, I have been hampered, hindered and humiliated by my imperfect classical preparation." Of this fact, but for his confession, we would forever have remained in ignorance, since nowhere in his writings—clear, precise and elegant, is there the least evidence of such deficiency.

He was married November 8, 1832, to Miss Elizabeth Miller, of Bladensburg. From this union there were born six children, only two of whom are now living—Sallie, wife of J. F. Gibbens, a planter of East Baton Rouge, and Benjamin A., a druggist, of Baton Rouge.

Having lost his wife by death, December 2, 1848, on the 31st of May, 1853, he married Miss Lavinia Elam, of Baton Rouge. To them were born five children, of whom there are now living Fannie, widow of Jerome Merritt, formerly a planter of East Baton Rouge; Molly, wife of Dr. C. J. Ducoté, of Cottonport, and Benie, wife of Dr. J. L. Deslattes, of New Orleans, both veritable helpmeets to able and honorable physicians. His third and last wife was Miss Kittie Rentrope, a woman of high culture and refinement, whom he married in 1868, and who, with three sons, the eldest 22 years of age, survive him.

He was graduated from the Washington Medical College of Baltimore, in Maryland, 1832, and immediately began the practice of his profession.

In May, 1837, he located in Mount Carmel, Wabash county, Illinois, and soon obtained a large practice. In 1843 he removed to Batesville, Arkansas, where he remained until 1846, doing a full practice until ill health forced him to seek a more southern latitude. In 1846 he settled in Patterson, St. Mary Parish, La. In 1854 he removed to Baton Rouge, where he remained until his death.

His conception of his mission as a physician was lofty, and his long, useful and successful career in every sense its fulfillment. In the address to which we have just alluded he said: "The mission of medicine, as I view it, is one of mercy and benevolence. It is sympathy for, and goodness to, suffering humanity. Not a lifeless, unfeeling sympathy, nor a cold, calculating benevolence, but a sympathy full of warm life and a benevolence that is ever active and energetic, braving perils, enduring toils, bearing up under privations and sacrifices, that human suffering may be assuaged, disease cured and life invigorated and prolonged."

Well and justly may the art of medicine be styled "The Healing Art Divine." If there is a calling, an occupation, a profession in this wide world that justly has a claim upon the confidence, the respect, the admiration and love of mankind it is the profession of medicine. Within the whole range of human occupations, or duties, or labors, it stands preëminently in the lead. Who can rightly estimate the real value to any

community of the truly conscientious, sympathizing, cultured physician, who devotes himself and his powers, and all the resources of his art, to relieving the suffering and healing the sickness of the afflicted. It requires no stretch of the imagination to view such physicians as they really are, the high priests of health in the families and communities they serve; and should be idols as well. And whoever enters this holy calling simply as a business, and assumes its responsibilities and its duties merely for a livelihood, has egregiously mistaken his calling, and is more obviously entitled to the long ears of the ass than was Midas for presuming to annul the decision of Ymolus in favor of Apollo's skill in music in his reputed contest with Pan.

As a physician he was wise, cautious and conservative, and his practice was large and remunerative. His professional success was founded on the solid basis of intellectual ability rather than on the adventitious aid of aggressive self-assertion, social qualifications or accidental associations—too frequently the stock in trade of the busy practitioner, so prominently displayed as it were in a show case. His forte was in painstaking attention to details in diagnosis, and to minutiae in treatment. If order is heaven's first law, that law was glorified in him.

His rare tact, judgment and skill in handling the most formidable of our endemic fevers—the dread scourge of the South, yellow fever—so clearly set forth in a paper read before his State Medical Society and published in its transactions, and subsequently copied by many medical journals, at once placed his name high in the list of authorities.

As a surgeon, he was bold, dextrous and self-reliant. Provided by his large experience and profound study with abundant resources for the most critical exigencies of his calling, no danger, however sudden or startling, ever blanched his cheek or quickened his pulse. No cavity of the human body was too sacred for his scalpel to invade, no operation so difficult of execution or grave in possible consequences that he dare not undertake, when in his opinion it was the right thing to do. His judgment was swift and well nigh perfect, and his procedure instant and admirably adapted to whatever accident confronted him. In his very last operation, done for the relief

of atresia vaginæ, with retention of menstrual blood, only a few days before his death, in which it was my privilege to assist, his hand was steady, his eye was just, his knife cut true and the result was perfect.

As a sanitarian his views were in accord with the best and most advanced thought of the age. His full recognition of the very close relation of hygiene to social advancement and human welfare and the greater efficiency of wise legislation in protecting and promoting public health, in connection with firmness of purpose, so prominently his characteristic, rendered him a most valuable member of the Baton Rouge Board of Health in its struggles with official indifference and popular ignorance of sanitation, and his loss is almost irreparable.

The graceful and graphic old world picture of a city prosperous and happy: "There shall yet old men and old women dwell in Jerusalem and every man with his staff in his hand for very age; and the streets shall be full of boys and girls playing in the streets thereof," was to him no fancy sketch, but a reality to which, under proper municipal sanitation, his own beloved city might attain.

As a teacher he was remarkably successful. Elected to the chair of "Diseases of Children" in the New Orleans Polyclinic in 1889, the following summer he delivered a course of lectures to the best acceptance of the faculty and students. His method was simple, his language well chosen and vigorous, his style compact. Recognizing the paramount importance of clinical teaching, the lecture room was used only to explain and expound those principles which he especially enforced and illustrated at the bedside. For reasons purely private and which in no way concern the tenor of this brief sketch, he, after due deliberation, decided not to retain the chair, and resigned its honors and emoluments to return to Baton Rouge and resume his practice.

As eminent and valuable as were his professional station and worth, his character and worth as a citizen were none the less conspicuous. In civic ardor and virtue it is no exaggeration to say he had no superior in the community in which he had passed the days of his manhood. Of political positions of honor and trust, he held not a few. As early as 1851 he was

elected to represent the people of the parish of St. Mary in the General Assembly, which he did with efficiency and acceptability. Wherever on duty, whether in the legislative hall, the walks of private life or the dread pressure of invisible contagion breathing the breath of death and desolation, one remarkable phase of his character presents itself—courage of the highest degree. It was this same courage—the courage of his convictions, which led him to resign his membership in the Baton Rouge Board of Health on failing to prevent its action in proclaiming quarantine against the world when in his judgment it was unnecessary. It was this same courage which caused him to align himself with the supporters of the Louisiana lottery in opposition to the views of his former political associates. Regarding secession as unwise, impolitic and fraught with the gravest dangers, he opposed it with an honesty of purpose born of exalted patriotism.

That his failure to actively participate in the fierce conflict which followed was not due to lack of sympathy with his “misguided people” may be inferred from the fact that he heartily approved the action of his son, whose blade from first to last flashed in the forefront of the fight, than whom no truer, braver soldier did battle for his country’s honor.

In the fiercer, fouler, deadlier conflicts of the baleful period of “reconstruction” his voice was heard from the senate chamber, whither he had gone at the earnest solicitation of his friends, and mainly through the suffrages of the simple minded and confiding freedmen of his district, in no uncertain tones against the wickedness and corruption in high places; and his efforts were constantly and vigorously directed toward the redemption of this State from the conditions of misrule and political degradation to which her people had been reduced, not by the violent soldiery who had conquered her in war—not these, heroic and chivalrous, who always

“Raise the foe when in battle laid low,
And bathe every wound with a tear,”

nor the patriotic and established citizens of any State who could claim a permanent local habitation, or were inspired by a pure purpose of genuine and salutary reconstruction for the common good of the common country, but migratory spoilsmen and

local recreants, itinerant stirrers of strife and home agitators of discord, who never saw the smoke of battle, who never felt a generous or patriotic impulse, and in whose dark souls, should such have by chance gained access, it would have perished from sheer loneliness. If he failed, it was because he fought in evil days, amid evil men, and that the hosts of darkness were for an hour stronger than the children of light.

Of his loyalty as a friend and his character as a gentleman, it is my special privilege to speak. I made his acquaintance as long ago as 1861, at Columbus, Ky., where I was on duty as an assistant surgeon in the service of the Southern Confederacy, under circumstances which bound us closely together. We met at the bedside of his son, a member of the famous Pointe Coupee Artillery, and my patient ill of typhoid fever. Then and there was formed a friendship, the growth of which in after years was only arrested by the possibilities of human nature. Always, and under all circumstances, he gave to me and mine the affection and fidelity of an elder brother.

In the intimate relations of all these years I have had abundant opportunity to know him as but few men know another. He had few intimate friends, but these conspicuous few who were admitted to the inner circle of his confidence were "grappled to his soul with hooks of steel." While he preferred the seclusion of his study and the companionship of his books, when on great occasions he was drawn into the social world, he was at ease, graceful and happy, in both expression and conduct.

Underneath his placid and dignified exterior flowed a broad vein of quaint humor and dwelt a keen zest for the pithy. He entertained with anecdote and reminiscence, with which his tenacious memory was always replete. In his relations with his medical brethren he was always, as to all men, eminently courteous, generous and just.

He was thoroughly in sympathy with the code of medical ethics, which he well understood, and held in profound contempt the charlatan. He always endeavored to conform his conduct to the maxim "In essentials, unity; in doubtful points, liberty; in all things, charity." His contempt for fraud and sophistry was great, yet in exposing them, he never forgot

the courtesy of a gentleman or the moderation of a Christian. His long life was one of large activities, of abounding usefulness, and of good and generous deeds. In all the storms and tempests of life, amid the rudest buffetings of fate or fortune (to which he was no stranger) he stood four square to all the winds that blew. With courage invincible, a will inflexible and nerves of steel, his spirit was as sensitive as a woman's and his heart as tender as a child's; a sufficient refutation of the oft repeated assertion that long familiarity with disease, human suffering and woe tend to harden the heart and render callous the physician's finer feelings, and establishes the fact, on the contrary, that by exercise they are strengthened and developed, as are other functions of the head and heart.

As a philanthropist he was foremost in every good work; a reformer in the truest sense of the term. Opposed to slavery, he yet had no sympathy with the abolitionist or his methods. Against capital punishment, for reasons good and sufficient, he insisted upon the severest punishment for crime consistent with the fullest utilization of the criminal's life. An earnest advocate for the intellectual emancipation of women, favoring for them identical but not coeducation upon physiological grounds, not moral, which last he regarded as an injustice to the sex, and an insult to their innate chastity. In favor of inhibitory laws for restraining the drunkard, the protection of society and the partial or complete support of a drunkard's family by his own labor under sanitary conditions, he was opposed to prohibition.

He labored for the uplifting of humanity, the physical amelioration of a suffering race, and as a consequence, mental and moral betterment. There was no cry too feeble to catch his ear; the wail of the new born babe, the moan of the pain-sick sufferer, the gasp of the outcast dying in squalor and misery, alike touched a cord in his heart.

Surely, if every just and upright deed, every kind and generous action, every "word spoken in season" live forever, the "records" of this good man's life in his multiform character have sent on a mighty wave to swell the choral harmonies of eternity.

Solely through his efforts, the Physicians' Mutual Benevo-

lent Association was organized, of which, in an appeal to the more than 1000 physicians of Louisiana, in 1888, he said, "I cherish it as the crowning glory of my long professional career that I have not been content to minister to the sick and dying, day and night, in sunshine and rain, during the heats of summer and the cold and storms of winter for fifty-six years, but that I have taken an active personal part in organizing and sustaining this Mutual Benevolent Association, to bless, comfort and relieve the destitute and helpless families of my brother physicians. In the natural course of events, it can not be long before I shall be taken from my field of labor; but whether I die soon or live long, I shall never cease to contribute and to labor, while I live, for the success of this the grandest and noblest of human benefactions." Well did he keep his promise. Language fails me to express the regret and mortification with which I make the record, not a dollar will be paid to his widow, the association having expired about a year ago.

He was a member of the American Medical Association, of the American Public Health Association, one of the vice presidents of the section on Public and International Hygiene of the Ninth International Medical Congress, a member of the Baton Rouge Medical Association, and also a member of the Louisiana State Medical Society, to the presidency of which he was elected in 1884. How earnestly he labored for their success and advancement their respective transactions fully attest.

He connected himself with the Methodist church early in life, and up to the time of his death was a consistent and regular communicant. He exemplified the personal excellence of true Christian character. He died in the triumph of his faith. "He that believeth in me, though he were dead, yet shall he live. And whosoever liveth and believeth in me shall never die;" then

"His day has come, not gone;
His life is now beyond
The reach of death or change,
Not ended, but begun."

Ere long the time will come when each of us shall "sleep with his fathers." May we profit by his example, live a life of equal rectitude, be as ready for the final departure as he was and at last rejoin him in the bright beyond. * * *

It only now remains, Mr. President, for me to move the adoption of the foregoing memorial, and the passage of the following resolutions, which I do with the mournful satisfaction that they have given me the opportunity to pay this sincere but inadequate tribute to the memory of the dearest friend I had on earth, and that they express, as I believe, the sentiments of his associates and friends:

Resolved, That in the death of Dr. Richard Hance Day, the medical profession, and especially that of Baton Rouge, of which he was a member, distinguished for his attainments and abilities, has sustained a loss almost irreparable, while we, as individuals, have lost a friend and brother, who was ever ready and willing to assist and aid with cheering sympathy and advice whenever and wherever possible.

Resolved, That we sorrowfully tender his bereaved relatives our condolence and heartfelt sympathy; knowing full well that the most sincere words of consolation must fail to relieve the acute agony of his grief-stricken and disconsolate widow, and that she must need support other than that which comes of human sympathy; while pledging love and affection for his sake, we commend her to Him who gave the blow.

Resolved, That a copy of this memorial and these resolutions be given the family of the deceased, and that a copy of the same be furnished the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL for publication, and also to the chairman of the committee on necrology of the various medical associations of which he was a member.

THE ELECTRIC LIGHT CURRENT IN MEDICINE AND SURGERY.

By WM. SCHEPPEGRELL, A. M., M. D.,
Assistant Surgeon Eye, Ear, Nose and Throat Hospital, New Orleans, La.

GENERAL CONSIDERATIONS.

Electricity is becoming more and more a necessity to man, and its application is spreading into every branch of industry. In medicine and surgery it has found a recognized position; and the question is no longer whether it shall be used or not, but what is the most practicable method of its generation and application.

As civilization and enterprise progress, our conveniences are increased. First we had the water led to our dwellings, then illuminating gas, and now the subtle electric fluid* is con-

* No theory will be advanced here as to the nature of electricity. For this and for the elementary studies on electricity, the reader is referred to special works on this subject.

veyed to our homes through insulated wires, to be adapted to our needs and conveniences.

There are four varieties of currents used for electric lighting. First, the constant potential current, in which the volts are constant, but the ampères vary according to the number of lamps in the circuit. The Edison is the type of this current, and it will be referred to here as the "Edison current." Then there is the direct current, in which the ampères are constant, but the volts vary according to the number of lamps in the circuit. If, for instance, there is a current of ten ampères and such lamp requires fifty volts, then 20 lamps would require 1000 volts, a potential that would be dangerous to life. This current should never be used in medicine or surgery.

Besides these there is an alternating current, of which two varieties are used, one constant in volts and varying in ampères, and the other constant in ampères but varying in volts. Neither of these should be used.

The potential of the Edison current ranges from 100 to 125 volts, varying with the station at which it is generated, but being kept at a constant potential at each station. The Edison Electric Illuminating Company, of this city, furnishes a current at 110 volts.

This is a safe current, as the resistance of the human body would not allow the passage of a sufficient current to be dangerous to life. The potential of each cell of the Law battery is 1.50 volts, so that the electro-motive force of seventy-five of these, in series, would be about equal to that of the Edison current.

The Edison current may be utilized in medicine and surgery for (1) illumination, (2) galvanism, (3) electrolysis, and (4) cataphoresis. By being stored up in accumulators it may further be used for (5) heating the electro-cautery, for (6) operating the drill motor, for (7) generating the faradic current, and for (8) the electro-magnet.

Before entering into the application of the electric current for these various uses, it would be well to explain the more common units used in electricity. These are the *volt*, the *ohm* and the *ampère*. The volt is the unit measure of electro-motive force, or difference of potential, the ohm is the unit measure of

resistance offered to the passage of the electric current, and the ampère is the unit measure of the quantity of electricity. The milliampère, a term much used in medicine, is the measure of one-thousandth part of an ampère. A volt is equal approximately to the electro-motive force possessed by one Daniel cell; accurately it is 0.95 of the E. M. F. (*i. e.*, electro-motive force) of this cell. The ohm is approximately equal to the resistance of 250 feet of copper wire, one-twentieth of an inch in diameter. The ampère is the strength of the current produced by the application of an electro-motive force of one volt to send a current through a resistance of one ohm. Let us imagine a pipe leading to a tank 100 feet high, and closed at the bottom by a stop-cock. We have then a pressure of 100 feet, which gives a certain flow of water through the pipe. Should we lower the tank fifty feet, we should have only half the pressure (fifty feet), and we should find that the flow of water would be only one-half as much as before. In the same manner, if we doubled the pressure by raising the tank twice as high, we should have twice the quantity passing from the pipe.

As long, however, as the cock at the bottom of the pipe is closed we have the pressure, but the water can not flow. Should we open the cock wide the water flows, but the more we close it the more resistance it offers to the flow of water, and the less quantity of water passes.

In electricity the 100 ft. pressure would be represented by the electro-motive force, measured in volts; the stop-cock would be the resistance, measured in ohms; and the water flowing through the stop-cock would be the quantity of electricity, measured in amperes.

We saw above that twice as much water passed through the pipe when the pressure was double, and only one-half as much when the pressure was diminished one-half. We also noted that the more the stop-cock was closed the more resistance it offered to the flow of water, and the less water flowed through the pipe. The same principle is true in electricity, hence Ohm's law that the quantity of electricity (in amperes) varies directly as the electro-motive force (in volts) and inversely as

the resistance (in ohms). This law forms the foundation of almost all calculations in electricity.

ILLUMINATION.

The incandescent lamp forms a convenient means of illumination for examining the accessible cavities of the human body. It gives a brilliant light with but a comparatively small expenditure of heat, is easily controlled and is not expensive.

For ordinary purposes the 50 candle-power lamp is sufficient, or even a 32 candle-power lamp, but when considerable light is needed the 100 candle-power lamp should be used. When the rays from an ordinary incandescent lamp are focused by a head-mirror, an inverted image of the incandescent filament is formed, which is at first annoying to the examiner. By placing the patient a little in advance of, or beyond, the focus, the intensity of the light is somewhat diminished, but the image is dispelled. In the commercial incandescent lamp the filament forms a simple curve. A superior lamp for illumination is the spiral incandescent lamp. In this the filament is in the form of a spiral, giving a greater concentration of light. A smaller lamp thus gives proportionally a much more brilliant illumination. When needed, the incandescent lamp may be placed in a box with a circular opening in the front.

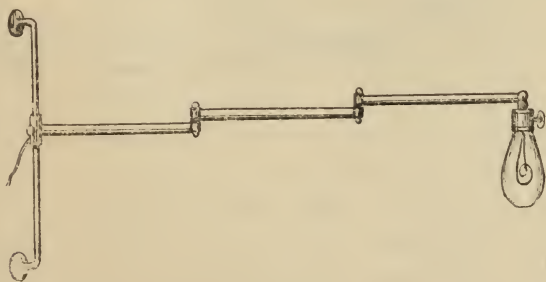


Fig. 1. Adjustable Bracket for Incandescent Lamp.

The lamp may be hung from an adjustable bracket attached by a sliding joint to a vertical bar, so that the lamp may be placed at a convenient height for the examiner. Fig. 1.

In using the Edison current for electric illuminators as the headlight, lamps for illuminating the mouth and the antrum of Highmore, etc., the current should first be diminished by

throwing a resistance into the circuit as of one or more lamps. A simple apparatus for this purpose is shown in Fig. 2.

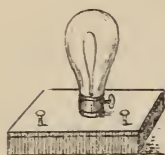


Fig. 2. Resistance Lamp.

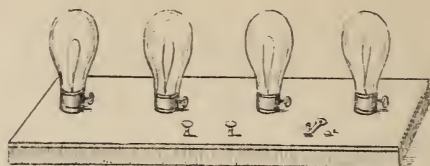


Fig. 3. Lamp Resistance.

It consists of a stand with two binding posts and a lamp. One binding post connects directly with one of the Edison wires. The second binding post connects with the lamp, the lamp connecting with the other Edison wire. The cords of the illuminator are connected with the binding posts. As the lamp is in the circuit it forms a resistance varying with the candle-power of the lamp used, a 16 c. p. lamp giving a resistance of 244 ohms; a 32 c. p. giving a resistance of 122 ohms, etc. It will be observed that the higher the candle-power of the lamp the less the resistance.

For an antrum illuminator a 32 candle-power lamp gives the proper resistance. Should the resistance be made too small, the illuminator will burn out rapidly; if the resistance is made too great, the lamp will not give sufficient light.

The resistance is regulated by the lamp, Fig. 2. Should a brighter light be needed the 32 c. p. lamp is removed and a larger lamp, say a 50 c. p., should be inserted into the socket. Should a greater resistance be needed, as for a smaller illuminator, a smaller lamp should be inserted into the socket. The switch of the resistance lamp turns the current into both the lamp and the illuminator, and also shuts off both lights.

A more convenient arrangement is shown in Fig. 3. It consists of four lamps which are connected in "multiple arc"—that is, one of the wires of each lamp is connected with the positive wire of the main, and the other wire of each lamp is connected with the positive binding post of the apparatus. The negative binding post connects with the negative wire of the main.

The lamps should be small, for instance two 16 c. p. and two 8 c. p. When the cords of the illuminator are connected with the binding posts, one, two or all, the lamps may be

switched into the circuit, each additional lamp allowing a stronger current to flow. If the illuminator does not give sufficient light when one lamp of the series is turned on, a second or third may be added, until the light is sufficient.

After adjusting the light the current may be switched on and off by the switch of the instrument.

When darkness is required, a black cloth may be thrown over the lamps or they may be covered by a box made for this purpose. When an electrical cabinet is used the lamps may be placed in the cabinet, the current being controlled by a switch on the table.

These illuminators may be more economically lighted by means of a storage battery in circuit with the Edison current. This subject will be referred to under the head of Storage Batteries.

The electric forehead illuminator is used by some surgeons, and probably has its advantages. The writer has not found this illuminator a practical substitute for the reflecting mirror, as the rays of light are not parallel with those entering the eye, so that many parts observed by the eye, either directly or by means of the laryngoscopic or rhinoscopic mirrors, are not illuminated.

The combined tongue-depressor and electric illuminator,



Fig. 4. Tongue Depressor with electric illuminator.



Fig. 5. Tongue Depressor and electric illuminator.

Fig. 4, is a useful instrument. Fig. 5 shows a different form

of the same instrument. It is intended to be used with a cautery handle.

The illuminator should be placed in the mouth by the light of a head mirror, the mouth closed, the lamp by whose light the illuminator was adjusted in the mouth should be darkened and the current turned into the illuminator. A switch may also be so arranged that the current is turned off from the lamp and into the illuminator by one movement of the switch. Before removing the illuminator from the mouth the current should be turned off, so as to avoid the possibility of burning the patient while removing the instrument.

Figure 6 shows an electric illuminator attached to a handle.

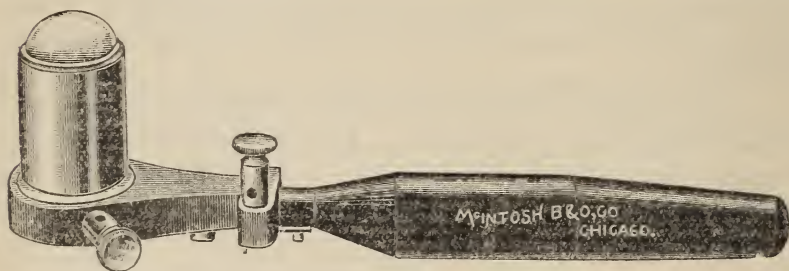


Fig. 6. Electric Illuminator for throat and ear, or examination of cavities, with condenser.

As a substitute for the reflecting mirror it has the same objectionable features as the head illuminator, with the additional disadvantage of requiring the use of one hand to hold it. Its use is therefore limited.

In addition to these there are a variety of small illuminators adapted to special purposes, as for illuminating the parts during an operation on the brain, illuminating the *antrum auris* during mastoid operation, etc. They promise valuable assistance in many cases.

GALVANISM.

The Edison current offers many advantages for galvanism. A galvanic battery unless properly attended to may short-circuit and run down, requires considerable space, and must be renewed at varying intervals. The busy practitioner desires the electric current ready for his use, if obtainable; he prefers to give his time and attention to its application rather than to

its preparation. The Edison current, being always kept at the same voltage, has therefore always the same capacity, and does not run down like a chemical galvanic battery.

The Edison current should, however, rarely be taken directly from the mains. As the electro-motive force in the main wire is kept at 110 volts, it is difficult to reduce it directly by means of a rheostat with the delicacy that is necessary in administering it to a patient. There is always some possibility of the current being short-circuited across the rheostat, which would inflict a painful shock on the patient. In addition to this the main wires of the Edison current are subject to induced currents when the wires of an alternating current pass in proximity of the Edison wires in any part of their course. These induced currents are the cause of the unpleasant vibratory feeling frequently complained of when using the Edison current directly from the main wires. A similar induced current is frequently generated on the telephone wires, and is the cause of the characteristic noise heard when using this instrument.

The writer has been experimenting for a considerable time with a view of effecting an apparatus by means of which the current could be controlled, and at the same time the induced currents could be avoided.*

Before describing the apparatus which I have devised for this purpose, let us explain how the electro-motive force of a current is affected by resistance.

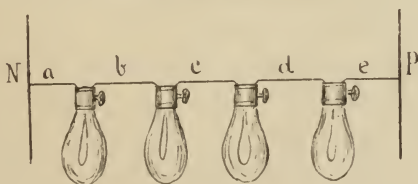


Fig. 7.

Let N and P (Fig. 7) represent the main wires of the Edison current, with a difference of potential of 120 volts. If the current be passed through four lamps of *equal capacity*, and therefore of equal resistance, we find that instead of the bril-

*I am indebted to Mr. Wm. Oswald, superintendent of the Southern Electrical Manufacturing Company, for valuable assistance rendered in making these experiments.

liant white light, we have a scarcely perceptible glow. The cause of this is that these lamps require 120 volts to become incandescent, and where more than one lamp is placed *in the circuit* the voltage is divided among them according to their respective resistances, and the lowered electro-motive force is unable to make them incandescent. If the cables of a voltmeter be placed at *a* and *b*, respectively (Fig. 7), it will register thirty volts, or one-fourth of the electro-motive force of the whole current; if the potential be measured between *b* and *c* the voltmeter will again register thirty volts, or one-fourth of the electro-motive force of the whole current; if the potential be measured between *b* and *c* the voltmeter will again register thirty volts, and the same between *c* and *d* and between *d* and *e*. The measure of potential between these points will be the same, whether the lamps are twenty, fifty, other candle-power, provided only that each of the four lamps has the same candle-power, or, in other words, has the same resistance. If, however, we place the cords of the voltmeter at *a* and *c* (Fig. 7), the voltmeter will register sixty volts, or the sum of the volts between *a* and *b*, and *b* and *c*. In the same manner, the difference of potential between *a* and *d* will be found to be ninety volts, and between *a* and *c* 120 volts, or the whole difference of potential between *N* and *P*.

If we allow the electric current to pass through these lamps, and attach wires to any two points, as *a* and *c*, and take our current from these wires, the lamps will form a *shunt* to the circuit which we are using, and we will have an available electro-motive force of 30, 60, 90 or 120 volts, depending upon the connection of our wires.

The use of this shunt not only allows us to select the strength of our current, but it performs another important function. As the lamps, acting as a shunt, offer very much less resistance to the current than the combined resistance of the water rheostat and patient, the greater portion of the objectionable induced currents pass over the shunt, leaving the constant Edison current for our service.

The principle is used in the volt selector and shunt shown in Fig. 8.

Four lamps *in circuit* are placed in the case, or in the cabinet, if this is used. The buttons of the switch are connected with the points *b, c, d, e* of the shunt (Fig. 7) respectively. the fifth button being the zero point. The left binding

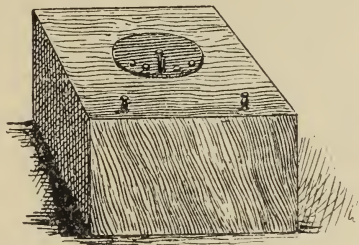


Fig. 8. Dr. Scheppegrell's Volt Selector and Shunt.

post connects with one of the wires of the Edison mains (N wire of the shunt, Fig. 7), and the second binding post connects with the arm of the switch. The batteries are marked 100, 75, 50, 25 and 0, these figures referring to the *percentage* of the volts of the current used. In a current of 120 volts, these figures would indicate 120, 90, 60, 30 and 0 volts, respectively. By adjusting the arm of the switch we can thus select 30, 60, 90 or 120 available volts.

As the principal portion of the induced currents pass over the shunt the currents which we take from the binding post of this selector are free from annoying vibrations.

Having brought the current to the binding posts, we must now determine which is the positive and which is the negative pole.

Connect wires to each of the binding posts, and dip their ends into starch water containing iodide of potash in solution. The iodide of potash will be decomposed or electrolyzed, the iodine appearing at the positive pole and the potash at the negative. The nascent iodine combines with the starch, showing the characteristic blue color. The wire at which the blue color appears is the positive and the other the negative pole. The binding posts should then be marked P and N respectively.

A simpler method of determining the polarity of the electrodes is as follows: Saturate a small piece of blotting paper with a solution of iodide of potash: on touching the moistened

blotting paper with the electrodes a brown spot will immediately appear under one of the electrodes. This is the positive and the other the negative electrode.

Having now a serviceable current at hand, we need certain appliances for using it. The necessary instruments are the rheostat for controlling the current, the milliamperemeter for measuring it, and electrodes for applying it.

Besides these it is convenient to have a pole changer for reversing the current, a rheotome for interrupting the current, etc.

The object of a rheostat is not only to graduate the current according to our needs, but also to turn it on and off gradually, so as to avoid any unpleasant shock to the patient.

If for instance we desire to administer a current of five milliamperes, and these are suddenly switched in, the patient will receive a disagreeable shock, which, if the patient moves sufficiently to break the contact with the electrodes, will be followed by a second shock, caused by the counter-electromotive force of the broken current. If, however, the current is

turned on gradually by a proper rheostat, and also turned off slowly, there will be an entire absence of any shock.

There is a number of good water-rheostats sold. The carbon (water) rheostat of McIntosh (Fig. 9) is a serviceable instrument. Its advantages are that there is very little danger of a short circuit taking place between the carbons, and that the screw attachment allows of a very delicate adjustment of the current.

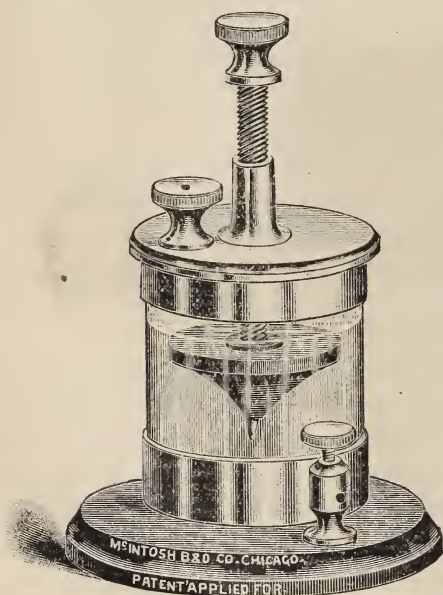


Fig. 9. McIntosh New Carbon Rheostat.

The Bailey Current Regulator is also much in use. It consists of two pairs of carbon plates, each pair connecting with a binding-post. The resistance is diminished by lowering the carbons into the water. For large currents it reduces the re-

sistance too rapidly, and the dipping into the water of the second pair of carbons usually causes an unpleasant shock. This rheostat I have modified so that it is a very useful instrument. The middle pair of carbons was removed, and the form of the remaining pair changed into an acute angle, so that the resistance may be reduced very slowly.

A rheostat of recent introduction is the new Bailey Current Controller, Fig. 10. It consists of two triangular shaped carbon plates so mounted over a cup of water that by means of a worm-gear operated by a hand-wheel the sponge tips attached to the carbon plates are gradually moved down into the water and toward each other until the plates touch at their lower points. Or, by turning the thumb-screw, the left hand plate may be unlocked from the gear and moved as far into the water as desired, and the other plate gradually turned down toward it, thus forming a more gradual increase of current.

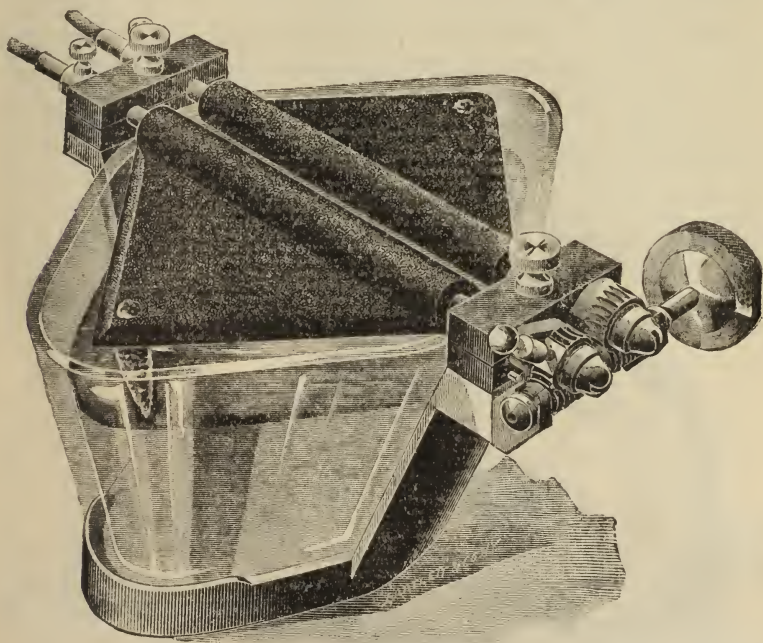


Fig. 10. The New Bailey Current Controller.

The mounting of this instrument prevents the possibility of any short circuiting between the carbon plates. Another advantage is the open cup, which prevents the condensation of moisture on the carbons and against the sides of the cup.

When used with the Edison current, and in connection with the volt selector and shunt (Fig. 8), this rheostat gives excellent results.

The Milliampère meter, used for measuring the current, should be sensitive, accurate and "dead-beat," that is, the pointer of the instrument should come to a standstill without an unnecessary number of vibrations.

One of the best is shown in Fig. 11. The magnetic needles of this meter are so arranged that they are free from the influence of the earth's magnetism, and the instrument need not be set with reference to the North Pole. The pointer is made of aluminum for lightness. This instrument contains three reading scales, stamped on the three faces of a celluloid roller. The range of the scales is 5, 25 and 250 milliampères respectively, thus making the measuring capacity of the meter from $\frac{1}{2}$ to 250 milliampères.

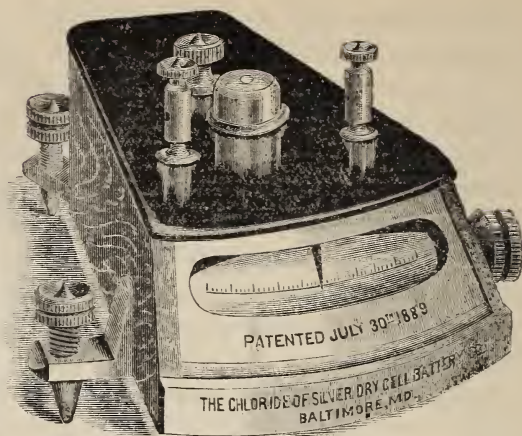


Fig. 11. Mil-am-meter.



Fig. 12. McIntosh Milliampère Meter.

b (Fig. 12), for stronger currents at *c* and *a*.

Fig. 12 shows another good milliampère meter. It contains two scales, the upper one being graduated from $\frac{1}{2}$ to 20 milliampères, and the lower one from 1 to 1000 milliampères. For currents of less than 20 milliampères, the connections are made at *c* and

Another serviceable instrument is shown in Fig. 13.

Both this and the McIntosh meter are now provided with reflecting mirrors, which enables the physician to see the measurements with much greater ease.

All milliampere meters should be carefully leveled, as this is necessary for the free play of the magnetic needles.

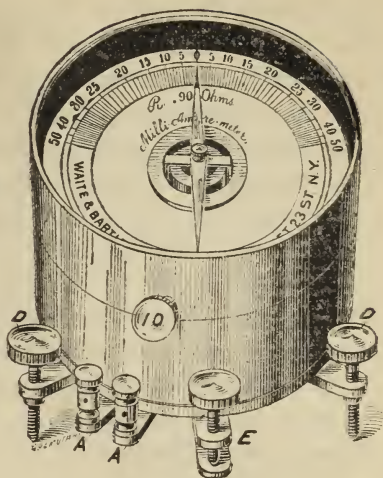


Fig. 13.

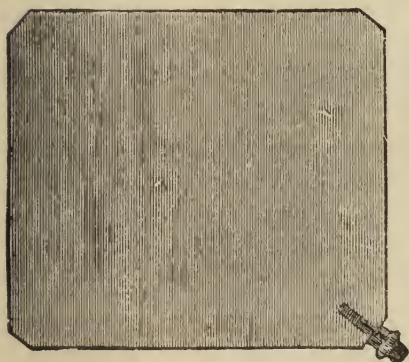


Fig. 14. Foot Plate.

There are two kinds of electrodes, the dispersing and the active. The dispersing electrode usually consists of a thin, pliable plate of lead or zinc, which is placed on the back, the chest, the abdomen, or under the feet (Fig. 14). A broad sponge may also be used or a clay electrode (Fig. 15) such as is used in the Apostoli method of treatment.

[TO BE CONTINUED.]

CASE OF HODGKIN'S DISEASE.

By DR. JULIUS F. SCHMITTLE.

[Read Before Orleans Parish Medical Society.]

Mr. President and Gentlemen—I have here a report of a case of malignant lymphoma, as it is called by Billroth, or, as it is more generally called, Hodgkin's disease. There is, of course, little novelty in what I have to say; the case, however, was so interesting to me I thought this report of it would be of some interest to the members of the society present to-night.

The patient died, and although I was not allowed a post mortem to confirm my diagnosis, nevertheless all of the symp-

toms present warranted the above diagnosis, and, furthermore, I had at different times two colleagues to see the case with me, and they were of the same opinion.

The patient was a female, 32 years of age, and had been sick eight months previous to my taking charge of her, and consequently had already had several physicians.

She gave me the following history: She said her illness began with an intense facial neuralgia which lasted about two weeks. After this she felt quite well for a month. At this time she had some fever, and experienced a stitching pain in her left side on inspiration, and noticed gradually that when she would lie down she could not breathe well.

This was called by her attending physician at the time intercostal neuralgia.

No doubt, however, as will be shown hereafter, it was pleurisy with effusion. From this time on her sufferings became more pronounced; in the course of time her breathing became so laborious that she would not lie down, for fear that she would smother.

Œdema of lower extremities came on, with extreme weakness. Seeing that her condition was becoming aggravated, she called in another medico. This one diagnosed the pleuritic effusion, and treated her for two months, during which time he aspirated the pleural cavity seven times, and each time drew out large quantities of a serous fluid. She had now become tired of this doctor and sent for me.

As I said once before, when I saw her for the first time she had been sick eight months. She was very much emaciated and upon a thorough examination I found the following condition of affairs:

An effusion in left pleural cavity, some enlargement of the liver, and an enlargement, I might say, of all the external lymphatic glands. There was quite an elevation of the chest over the apex of the left lung—this was due to a chain of enlarged glands, which also produced an intense œdema of the left arm from pressure on the subclavian vein.

She had some œdema of the lower extremities and a little ascites. Her urine was examined and found to contain leucin and leucocytes. Leucin, which is rarely found in the urine, I think was due to rapid wasting.

It might have been well in this case to have examined the blood, but I neglected doing so.

Now, these enlarged glands everywhere struck me very forcibly as though they might be the prime cause of all the trouble, and upon questioning her closely, I obtained the information that she had had some kernels in each groin long before she felt ill in any way. She said they had increased somewhat gradually in size, and as time wore on, others made their appearance in different parts of her body.

There was no appreciable enlargement of the spleen to be felt, although by some authors enlargement of this organ is supposed to be one of the essential lesions of this disease.

She was a married lady and had had three children and one miscarriage. Her health had always been comparatively good up to the beginning of this illness. I could not make out any specific trouble.

The oldest child, a girl of eleven years, was not healthy; the other two, however, the younger of which was a boy three years of age, were exceedingly healthy.

I here might state, merely as a coincidence, that while treating the mother I also treated the oldest child, who had a pleurisy on the left side with effusion.

To go back to the mother now: some glands were larger than others, those in the inguinal regions were the largest, while those in the cervical regions were the smallest. None, however, exceeded the size of a walnut.

They were all firm in consistence, and freely movable upon one another.

Patient was anæmic and very much depressed mentally. I learned later on that this mental depression was simply due to the fact that two weeks had now elapsed since the pleural cavity had been aspirated, and as she could tell that it was pretty well distended, it worried her a great deal, and her only desire was to be tapped, as she thought since aspiration gave her so much relief they would eventually produce a cure.

I was compelled to aspirate, and the effusion was so rapidly renewed that I repeated the operation five times in the course of a month and a half.

I drew out at least two pints of a serous fluid each time, with marked relief to the patient every time.

There was more fluid there after each tapping, but the patient coughed so much and the needle gave her so much pain when she coughed, that I desisted whenever the cough became too violent.

These frequent tapings were, of course, but temporary alleviations; they improved her general condition, but had no effect upon the disease proper.

After each aspiration the patient was able to walk about the house, and would even amuse herself by singing, furnishing her own accompaniment on the piano.

They relieved her anxiety, but did not even diminish, much less stop, the accumulation of serum.

As I had tapped the pleural cavity so often without any material effect, and the peritoneal cavity had now become so enormously large, I thought paracentesis of this might be a greater relief, since it interfered with the action of both lungs.

I accordingly tapped the abdomen and took out about a gallon and a half of milky looking fluid. I had some of it examined, both with the microscope and chemically, and it was found to be a fatty emulsion, evidently a chylous ascites.

This indeed surprised me a great deal, and the only way in which I can account for it is, that possibly some enlarged gland or glands in the abdominal cavity occluded the calibre of some chyle-conveying vessel by pressing upon it, and the vessel ruptured from over-distention—thus admitting the chyle into the peritoneal cavity.

During this tapping she became very weak, her pulse being hardly perceptible at the wrist.

The fluid did not renew itself nearly so rapidly as in the chest; however, the patient day after day, was growing weaker and weaker, and when the abdomen filled up again, she was so prostrated that I did not tap it again, for fear that she might die during the performance. At no time while she was under my care was there any rise in her temperature. She complained very often of pain in her abdomen, and of severe shooting pains in her left arm.

It seemed as though the end would never come to this unfortunate woman.

In the last period insomnia was present. She suffered

very much from dyspnœa; for four weeks she sat up constantly in a rocking chair, most of the time inclining her head and shoulders forward, gasping for breath, with every auxiliary muscle of respiration brought into use. Deglutition had become impeded and she could take nothing but liquid nourishment and but very little at a time.

She had two large sores in the gluteal regions from sitting steadily, and these added greatly to her discomfort.

She had a profuse diarrhœa, some suppression of urine, and death ensued under symptoms of collapse. From what I know of the treatment in this trouble, the practitioner is thrown on his own resources, and must use the measures which seem in his judgment to be indicated by the appreciable morbid conditions.

Thus, the treatment which I employed in the beginning, outside of the frequent tappings consisted of the administration of iodide of potash and diuretics. Some authors have asserted that arsenic has effected cures. I used arsenic both internally and externally in this case for six weeks. I gave Fowler's solution internally, and used the iodide of arsenic externally, about an eighth of a grain rubbed in daily with no effect whatever.

When I saw that this treatment did not benefit her any, and that she was growing weaker, I gave her the citrate of iron and quinine, nux vomica and digitalis. Later on carbonate of ammonia, belladonna, whiskey and other stimulants. Extirpation of isolated groups of enlarged glands, when they produce trouble from pressure and you can get at them easily, is recommended. But, as in this case, when the greatest trouble is caused by internal glands, operative interference would mean earlier death to the patient.

Proceedings of Societies.

THE CLINICAL SOCIETY OF MARYLAND.

BALTIMORE, December 2, 1892.

The meeting was called to order by the vice president, Dr. J. M. Hundley.

Dr. J. E. Michael read a paper entitled

SYMPHYSIOTOMY, A SUCCESSFUL CASE—A SUGGESTION.

The ancient history of the operation was briefly referred to. Dr. Harris' paper, read before the last meeting of the American Gynecological Society and published in the *American Journal of Obstetrics* in October, 1892, leaves little to be said as to the modern history of the operation.

Dr. Harris' table, showing forty-four operations from January, 1886, to July, 1892, by various operators, with one maternal death, three still-born children dying respectively at twelve and seventy-two hours, made a profound impression on the American profession.

Dr. Charles Jewett, of Brooklyn, was the first American operator. He operated on September 30, 1892. The child died in twenty-four hours from the effects of long continued pressure. The recovery of the mother was uneventful.

Prof. Hirst, of Philadelphia, operated October 2, 1892. Mother and child saved. Dr. Michael operated at the Free Lying-in Hospital of the University of Maryland October 24, 1892. The patient was a rachitic negress, 4 feet 6 inches high, 17 years old. Labor began on the morning of the 23d. Dr. Michael saw the patient at 9 P. M. Os barely admitted two fingers. Head large and no sign of engagement. Fœtal and maternal circulation good, and general condition of patient satisfactory. It was concluded to wait for greater dilatation, and operation was postponed till morning. Operation at 9:30 A. M., chloroform anæsthesia. Os still small; most of the amniotic fluid had escaped and the fœtus was suffering from pressure. Fœtal head obviously large and no possibility of engagement. The bladder was evacuated and then the os uteri dilated until four fingers would enter. The soft tissues were incised down to the symphysis and the attachments of the recti were separated for half an inch on each side. The finger was passed down behind the symphysis until it projected below. The soft parts from the outside below were incised down to the finger tip. An ordinary curved probe-pointed bistoury was passed behind the joint and the cartilage severed. Delivery by Simpson's modification of Tarnier's forceps. Pubic separation at its highest point was $2\frac{7}{8}$ inches. Notwithstanding all precautions, the cervix was lacerated into the vaginal vault, the perineum to the verge of the anus and the anterior vaginal vault into the operation wound.

The lacerations were repaired at once with catgut. The wound of the symphysis was sewed with gut, the deeper stitches including the pubic ligaments. The surface was powdered with aristol and dressed with iodoform gauze.

Broad adhesive strips encircled the pelvis and were covered by a firmly applied bandage. The puerperium was uneventful. On the ninth day the patient was allowed to sit up in bed; on the eleventh day sat up a little while in a chair; on the twelfth day could walk well and firmly. At the present time she walks all over the hospital and as firmly as before the operation. The child died on the third day, the death being due to the pressure which had occurred previously to the delivery. Dr. Michael, since the operation, has procured a Galbiati knife which he believes would have been of great service in the operation.

Dr. Michael believes that symphysiotomy will not only to a large extent take the place of cæsarean section and of craniotomy on the living child, in cases of contracted pelvis, but will be of service in the delivering of living children in cases of bad presentation where formerly craniotomy had been resorted to. He has examined this matter experimentally with a fœtus of large size and a pelvis, with the soft parts attached, of comparatively small size. Placing the fœtal head into the pelvis and producing a posterior rotation of the chin delivery was attempted by forceps, but was found to be utterly impossible. Symphysiotomy was performed, and after the pubic bones were separated $1\frac{1}{2}$ inches the head was easily flexed upon the trunk, and the occiput brought under the pubic arch and delivery by extension occurred in the usual way. Dr. Michael was so impressed with the feasibility of this operation that he intends to perform it on the first case of malposition of the head which presents itself to him. In cases where the occiput is posterior and the delivery of the child with forceps is accompanied with a great amount of violence, he thinks that this operation may be indicated. The number of operations which have been performed the present year the world over, as collected by Dr. Harris, of Philadelphia, is twenty-six. In this list there is no death of the mother. The statistics are remarkable, both as to the safety of the woman and the healing of the wound.

Dr. Hunter Robb asked Dr. Michael if in his case he had been able to suture the pubic ligaments as described by Leopold, of Dresden, in a case of symphysiotomy.

Dr. Michael said that the ligaments of the pubes offered a very considerable amount of tissue which might be caught with sutures. It would be unwise to depend upon sutures however they were passed. The pressure from the sides as produced by adhesive plasters and a well applied bandage over them is so complete that you get a support which no suture of any kind could supply, and it would not make a very great amount of difference if the ligatures were not applied at all.

Dr. Robb congratulated Dr. Michael upon the success of this case. He thought that symphysiotomy would undoubtedly have a prominent position in obstetric surgery. On account of the simplicity of the operation there will be great danger of its being performed more often than is necessary.

The pelvic measurements should be made as carefully as possible with consultants of sufficient experience before operation, just as is done when Cæsarean section is thought of. In some cases the operation is undoubtedly so clearly indicated that immediate action is justifiable, but these cases, he believed, form the large minority. Symphysiotomy does not provide for as many abnormal conditions as Cæsarean section; for example, where one has to deal with cancerous growths of the cervix, pelvis exostoses, tumors of the uterus, and some deformities of the pelvic bones, it would be useless to do symphysiotomy.

He believed, however, that the operation would perhaps save the lives of many children; on the other hand, it may leave undesirable results in the mother.

Dr. William S. Gardner said that the profession was indebted to Dr. Michael for bringing this subject before them. This operation will almost entirely take the place of craniotomy on the child where the condition is that of contracted pelvis. Of course nobody would dream of doing symphysiotomy for a cancerous cervix or where the obstruction was due to any other condition of the pelvis than that of contraction. The operation will also cut in very largely upon the cæsarean sections, especially those cæsarean sections done in the United States. The fact is very well known that we have in the United States a very small number of extremely contracted pelves, and that a large percentage of the cæsarean sections that have been done were upon women who had only what is known as the "relative indication." With reference to the suturing of the pubic bones, Leopold remarked at the time he was stitching the wounds that he did not consider the stitching of very much value, and that he placed his main reliance upon the external bandage. The bandage which he used was made of heavy ducking, and was fastened by a buckle resembling an ordinary suspender buckle. The hips were padded with towels and this bandage was drawn over them very tightly, in fact so tightly that it produced sores on the crest of the ilium in his first case. In Germany and in most of the European countries they have a large number of cases where the degree of contraction is so extreme that symphysiotomy is not a practical operation. The Galbiati knife is probably of great convenience to the operator.

Dr. Norment was particularly interested in the suggestion

which Dr. Michael made as to the performance of symphysiotomy to save the necessity of craniotomy upon the living child on account of malposition of the fœtus. He had once been compelled to do craniotomy in a face presentation, chin posterior. He saw very readily wherein the operation of symphysiotomy would give relief to that condition. It is an operation which is not to be attempted by any and every one. As Dr. Robb said, it should not be resorted to until after the judgment of able consultants had been passed upon it. The necessity of getting consultation or of getting some one else to do the operation would take away from it a great part of its service, because often in private practice the delay necessary to secure these things would be dangerous to the mother.

Dr. Branham thanked Dr. Michael for bringing up the subject. He thought that the operation was still on trial, and that it would not be best to jump to the conclusion, as is so often done when these operations are revived or first brought out, that it is to be a continued success. The statistics on the subject as presented are extremely favorable to the operation, and it seems undoubtedly that the very recent operations have been quite successful, but even since the introduction of antiseptic methods the operations done between the years 1880 and 1886 and collected by Morrisani give a mortality of eight in eighteen operations. Of course, the mortality seems to have been reduced almost to nothing, but I am inclined to think that more than likely the favorable cases have been reported and the unfavorable cases have not. It hardly seems probable that an operation could be so much improved since 1886. A good many cases which have gotten well have been followed by chronic disease of the bones about the pelvis. The probabilities are that better antiseptic precautions have diminished the frequency of this sequel. It is more than probable that there will be a certain number of cases in which more or less permanent injury will result. The operation will, doubtless, have a future; still we should not conclude, until these cases have been done for a long time and the final results as to the condition of the pelvic bones are known, that this operation is going to take the place of cæsarean section. As far as operation in cases of impaction is concerned, if it can be done in time to save the child it is a very good thing and will doubtless be carried out in a great many cases.

Dr. Michael—Of course the operation of symphysiotomy in case of tumor and cancer and that sort of thing is not to be thought of. It only applies to such conditions as can be changed by the effect upon the bones. The discussion of the question of symphysiotomy in a case of malposition can only come up

when the head is down and impacted. With a child dead and posterior chin or a child nearly dead, of course, symphysiotomy is not to be thought of, but with a jammed head and a living child, where the alternative rests between craniotomy and symphysiotomy, the latter is to be elected. Dr. Branham's position in regard to conservatism is a proper one. We should always receive new operations with a certain amount of skepticism, and it is very well to look closely into the results of operations before jumping to conclusions. What he says in regard to operations between 1880 and 1886 is perfectly correct, but if he will look over hernia or any other class of operations in which much tissue is involved or cavities of importance invaded, which were made within the same period, he will find that the mortality is greater than it is to-day. Even the operation of cæsarean section has improved wonderfully since the period mentioned. As to the matter of reporting only favorable cases, we certainly have a complete record of the work of men who are prominent in these branches, and in whom the suppression of unsuccessful cases would be simply disgraceful. I am firmly convinced from Dr. Harris' figures that there is an amount of improvement in the results of symphysiotomy due to antiseptics that is represented by the reported cases. Of course, there must be concealed cases of any operation of gravity, but the reports we have here are fully as reliable as reports of any subject of this sort. We have not here an operation which is on trial. When we can present a record of fifty-two cases it strikes me that the utility of the operation for saving life has been demonstrated. If we do not accept this number of cases as proving it, then I do not see how we are ever going to prove it. We should not hinder the wheels of progress by referring to the bad work of ignorant people. I think the utility of the operation is demonstrated.

Dr Hunter Robb read a paper on

HYSTEROMYOMECTOMY FOR LARGE MYOMATA OF THE UTERUS.

Dr. Robb strongly advocated the intra-peritoneal method of treating the pedicle after the removal of a myoma of the uterus. The dangers of sepsis and hæmorrhage with improved technique are less than when the extra-peritoneal method is employed, and are not much greater than in an ordinary ovariectomy. The various devices for controlling hæmorrhage were considered. The danger from sepsis from the cervical canal can most surely be obviated by curetting both the uterine and cervical mucosa several days prior to the removal of the tumor. At the same time the cavity of the uterus can be cauterized gently with the small point of a Paquelin cautery, and a strip of 10 per cent. iodoform gauze packed in, to be removed the

day before the operation. The vagina can be made sterile by irrigation twice daily, for two or three days prior to the operation, with a $\frac{1}{3}$ per cent. warm solution of carbolic acid. The vagina between douches should be packed with iodoform gauze. The external genitals should be rendered aseptic. After removal of the tumor the cervical canal should be sterilized by plunging the Paquelin cautery well into the lumen of the canal. The results obtained by this method in the Johns Hopkins Hospital within the past year and a half have been more satisfactory than where other methods were employed. The period of convalescence is shortened, and there is not nearly so much danger of the hernial complications that are apt to follow other methods. Dr. Robb now drops the pedicle in every case of hysteromyomectomy. The paper was illustrated by large bromide prints showing the different steps taken in the operation described.

Dr. W. P. Chunn thought that a method which had not been mentioned by Dr. Robb—namely, where no pedicle was left at all, was a particularly good variety, and one which would some time come into a great deal of use. He believed that wherever it was possible to get rid of the extra-peritoneal method it should be done, for with the greatest care we are apt to have some sepsis. In cases where hæmorrhage is feared, he advised that an extra suture be passed through the stump and be allowed to come out at the lower end of the abdominal wound, so that it can be gotten at more readily if hæmorrhage occurs.

Dr. W. S. Gardner described a method of dealing with the stump by covering it with flaps of peritoneum. He advised cutting out a rim of tissue around the cervical canal after the use of the Paquelin cautery, so as to get fresh surfaces instead of the cauterized. When there is a considerable mass of tissue in the stump it is difficult to tie it tight enough with ligatures to control hæmorrhage. The uterine tissue under pressure will decrease in size and the ligatures become loose. A useful measure to prevent hæmorrhage is to pass a stitch around each uterine artery.

Dr. Robb—In my paper I have considered only whether we should drop or in some way fix the pedicle, and I have endeavored to show that with our improved technique we are able to drop the pedicle and not treat it by any form of fixation in the abdominal wound. The entire removal of the uterus practically leaves no pedicle, and therefore I have not mentioned this method, nor the method of vaginal fixation described by Dr. Byford of Chicago.

The point of greatest interest to abdominal surgeons is

whether the pedicle is to be treated extra-peritoneally or intra-peritoneally. The dropping of the pedicle is the ideal procedure and does much to simplify the operation. I think it is generally conceded that our technique must be such that this method can be employed.

The uterine arteries can be ligatured in some cases in the way which Dr. Gardner mentioned.

Dr. Edwin K. Ballard exhibited

A LARGE UTERINE FIBROID REMOVED BY SAW-SPOON.

The patient, Miss B., aged 53 years, entered the Hospital for Women of Maryland suffering from a sub-mucous fibroid about the size of a foetal head. Ergot was given for a number of weeks and the os dilated under this treatment to the size of a silver dollar. The patient had formerly suffered from profuse hæmorrhages and was weak and anæmic. On November 29, Dr. H. P. C. Wilson, assisted by Drs. R. T. Wilson, E. K. Ballard and W. McL. Yost, operated for the removal of the growth. The pedicle was broad, sessile, and attached mainly to the fundus and the posterior wall of the uterus. It was found utterly impossible to use the ecraseur. The Thomas saw-spoon was passed the full length of the shank, 8 inches, but failed to reach the base of the tumor. Nothing remained but to cut away portions of the protruding mass and remove it piecemeal. Accordingly an attack was made on the main body of the growth, from which a piece was sawn loose, pulled out and cut off with saw-scissors. The next presenting portion was seized by vulsella, dragged down and detached in a similar manner. After a number of sections had been thus removed, the remaining pedicle was drawn down into view and acted upon by the saw-scoop, with which it was, after much difficulty, on account of its density, cut away. By this time the patient had lost a very large quantity of blood and was profusely collapsed, but by vigorous stimulation with amyl-nitrite by inhalation, together with whiskey and digitalis hypodermically, she was somewhat revived. Cervix and perineum were both torn during the operation. After removal of growth the uterus was flushed with hot water and mopped with a mixture of Monsel's solution, carbolic acid and glycerine as an antiseptic and styptic. The patient was carefully put to bed and stimulation continued. She promptly rallied and has progressed favorably.

W. T. WATSON, *Secretary.*

1519 N. Broadway, Baltimore.

BALTIMORE, Md., December 16, 1892.

The 273d regular meeting of the Clinical Society was called to order by the president, Dr. William E. Moseley.

Dr. Geo. J. Preston read a paper on

TRAUMATIC LESIONS OF THE SPINAL CORD

and showed many specimens illustrative of his subject. He considers the medical treatment of traumatic lesions as almost useless and urges surgical treatment.

Dr. J. W. Chambers said that in the past we have been in the habit of applying certain surgical principles to injuries of the head which we did not apply to injuries of the spinal cord. When a man has an injury to his brain no reasonable surgeon would hesitate to cut down and remove blood clots, etc. The same rule ought to apply to injuries of the spinal cord; we should cut down and remove spiculæ of bone, blood clots, etc., and put the wound in a condition of drainage. The anatomical conditions surrounding the spinal cord are not particularly favorable for the rapid absorption of blood clots. His experience, especially with experimental injuries upon dogs, leads him to believe that the spinal cord is capable of more repairs than is usually thought of. Certain localities of the spine in well nourished people are very difficult to operate upon, but convenience to the operator should not be a consideration in the case. So long as you do not increase the patient's danger it is all right to operate.

While we can not repair the parts of the cord which are destroyed primarily, we might prevent the injury which comes on secondarily from the pressure of the blood clot and the irritation of the bony fragments. We might in this way avoid bed sores, cystitis and a number of other sequelæ that are as fatal and more injurious than the lesion to the cord proper.

He had known a number of the cases reported by Dr. Preston. One of the cases, a young man, a doctor, was injured by diving in shallow water. He was dragged out by his friends and in a little while consciousness returned and he suffered intense pain in his arm and was almost totally unable to use his arm and his leg. Twenty-four hours after the injury he had no pain and no discomfort, and was perfectly intelligent. He remained in this condition about forty-eight hours. About six hours previous to his death it was noticed that he began to have a very high temperature, 105 to 108.5, and two hours after death the temperature was 109 in the muscles of the back.

Another case was that of a young man diving in shallow water in almost the same spot as the first and receiving exactly

the same injury. He lived three days. No autopsy was held. The diagnosis was, fracture of the fifth cervical vertebra. The first twenty-four hours he was apparently comfortable, joking with those around him and enjoyed his food. The last twenty-four hours before death the temperature rose rapidly and was 108.5 an hour before he died. The temperature was 107 in the rectum two hours after death.

A third case was that of a man falling or jumping from a bridge into shallow water and brought into the hospital with symptoms of fracture of the upper portion of the cervical region. He did not have a temperature above 101. There was almost complete paralysis of legs and arms. He lived nearly three days.

Four of the cases related by Dr. Preston were fractured in about the same way by diving in shallow water. The head in these cases did not give way, doubtless because it was cushioned more or less by the water. The fracture of the cervical vertebræ was probably due to excessive flexion. The most marked flexion would take place about the fifth cervical vertebra, and this is a vertebra most frequently broken.

An interesting feature is the rise of temperature. The temperature of a man who had been hanged, when taken by Dr. Chambers fifteen minutes after death, was found to be 102. If the fracture is much above the fifth cervical vertebra the man does not live long enough to let the temperature run up. The higher up the fracture the more likely we are to have high temperature.

Dr. J. M. T. Finney heartily endorsed what has been advocated by Doctors Preston and Chambers in regard to the surgical treatment of these cases. Very little harm has been done by operation, and in a number of cases a great deal of good has unquestionably resulted. Under the present system of antiseptic surgery question of possible harm being done can no longer be raised against surgical treatment. There is no class of patients that appeals to one's sympathies so much as these unfortunate ones of injuries to the spinal cord. Dr. Finney had seen a number of cases almost identical with those related by Dr. Preston. In one case where the fracture was about the seventh cervical vertebra the man lived about six weeks. He had no elevation of temperature.

Dr. Preston said that after injuries to the cord the sensory symptoms improved sooner and to a greater degree than the motor. The thing that kills the patient is often the cystitis and bed sores and other trophic conditions, and an operation would probably often allow enough repair to take place to prevent the trophic symptoms. There is no doubt that in a great many of

these cases the most important injury to the cord is certainly secondary, due to ensuing inflammation.

These cases are ones for legitimate experimentation, that is cases of what may be called entire crush of the cord, for they are hopeless as far as medical treatment is concerned.

The work of Abbe and others is certainly suggestive. Whether we can ever do anything by joining the nerve roots above and below the injury, as Abbe has tried to do, remains to be proven, but it is barely possible that that or some similar operation may relieve the trophic influences and may allow a sufficient conduction of impulse through the cord to bladder and rectum, etc., to keep the patients alive.

Dr. Edward J. Bernstein read a paper on

SKIASCOPY OR OBJECTIVE OPTOMETRY.

Dr. Harry Friedenwald considered this method of measuring the refraction of the eye as one of great advantage. It is the simplest of all the methods and is one that can be easily demonstrated to students. The simplicity of it enables the general practitioner with instruments of great simplicity to measure the refraction easily and rapidly.

Dr. Friedenwald related

A CASE OF SYPHILIS OF THE EXTERNAL AUDITORY CANAL.

The patient was a colored man, 25 years of age. He had chronic discharge of pus from his ear. The external auditory canal was filled with polypi. He made no improvement on the usual treatment for aural catarrh. It was found that the patient had recently had a chancre, and it was seen that the growths had the appearance of syphilitic papules. He was put upon anti-syphilitic treatment and within a very short time polypi had entirely disappeared, leaving a clean auditory canal and a normal drum head. Syphilis may affect the internal ear or middle ear, but it rarely affects the auditory canal, and this is evidently a rare case.

Dr. J. H. Branham related

A CASE OF DRAINAGE OF A TUBERCULOUS ABSCESS OF THE LUNG.

The patient has had phthisis for over a year. His lungs were in good condition excepting the middle lobe of the right lung, in which there appeared to be an abscess in the anterior part. The patient was failing rapidly, and suffering from a harassing cough. The abscess was cut down about a week ago, and was found to contain a teacupful of pus. The sixth rib was resected over the abscess so as to allow of recession in

case of improvement. The patient since the operation has been tolerably well; has some fever. The cavity has been washed out twice a day with antiseptic solutions. The abscess is filling up, and Dr. Branham is hopeful that it will heal entirely.

Dr. Chambers asked how much lung had to be cut through before the abscess was reached, and if there was much hæmorrhage in the portion of the lung traversed in reaching the abscess.

Dr. Branham replied that the anterior wall of the abscess consisted of lung tissue thoroughly infiltrated with the tubercle and there was strong and complete adhesions between the lung and the parietal pleura. The abscess was about half an inch from the surface and the tissue broke down readily within the handle of the scalpel and the finger-nail. There was practically no hæmorrhage.

Dr. S. K. Merrick told of a

PECULIAR CASE OF NASAL REFLEX.

The patient came to Dr. Merrick's office on crutches. He had been under treatment for about six weeks for a pain in his right hip. He had a slight hypertrophy of the inferior turbinated bone in the nostril, to which Dr. Merrick applied the galvano-cautery. In twenty-four hours the patient came back without crutches. He is now at work and has perfect use of his limbs.

W. T. WATSON, *Secretary*.

1519 Broadway, Baltimore.

GYNECOLOGICAL AND OBSTETRICAL SOCIETY OF BALTIMORE.

NOVEMBER MEETING.

The president, Dr. B. B. Browne, in the chair.

Dr. George H. Rohé read a paper entitled "Gynecological Work Among the Insane."

The subject was treated under three heads:

1. Is it necessary?
2. Is it practicable?
3. What are the results?

To show the necessity of the work it was stated that of thirty-five insane women examined, twenty-six, or 74.3 per cent., showed some evidence of pelvic disease or abnormality. The lesions found were mostly tears of the perineum or cervix, uterine displacements with adhesions, adhesions of the tubes and ovaries, cystic ovaries, parovarian cysts, etc.

Dr. Rohé expressed the belief that a careful examination by a competent gynecologist would show that at least 50 per cent. of all insane women had some form of pelvic disease. This large percentage of diseased pelvic organs among the insane certainly indicated the necessity for gynecological treatment among this class of patients.

That this work can be successfully carried out among insane women is evidenced by the report of eighteen cases of abdominal section with removal of the tubes and ovaries. The patients were affected with the various clinical forms of mental disturbance—melancholia, mania, periodic mania, hysterical mania, puerperal insanity, epileptic insanity and hystero-epilepsy.

The duration of the insanity in the various cases was from one month to eleven years. In all but one case the insanity had lasted over a year, and in very few were there any good prospects of recovery under the usual management.

At the date of reading the paper, three of those operated upon had been discharged recovered, and in ten there had been decided improvement in physical and mental symptoms. Two had died after the operation, one from sepsis, and one in *status epilepticus*.

These results are believed by Dr. Rohé to justify the prosecution of gynecological work among the insane. The plea is made that the insane woman is as much entitled to relief from physical ills as is her sane sisters. No argument beyond the recital of the facts should be necessary to enforce this view.

Dr. William P. Chunn—I have operated upon two cases of hystero-epilepsy. In both I removed the ovaries. Both recovered from the operation and both were improved in general health. I would be very loth to operate upon any case where examination failed to discover to the touch appreciable disease. It is well to differentiate between epilepsy and hysteria. The former is, in my opinion, incurable. If a woman is made peevish, irascible and melancholy, or unreasonable from pain, or the dread of pain, she may be called nervous or hysterical, but this is not epilepsy.

Personally I would not take out ovaries or tubes for hysteria or epilepsy unless disease could be demonstrated before or at the time of operation.

Dr. Wilmer Brinton—I have seen three cases of puerperal insanity in private practice; they were treated for a while at home, but they became so violent the families were compelled to send them to an institution for the insane. All three cases died there, and their deaths occurred within ninety days after

delivery. I believe that the greater number of cases of puerperal insanity result from septic inoculation at the time of delivery, or from some lesions of the genital tract.

Dr. Thomas Opie—Dr. Chunn has remarked upon the fact that in several of Professor Rohé's cases there was no pathological state of the ovaries discovered, and that therefore the operation for their removal was contraindicated.

There are occasionally met with cases when our manual explorations reveal no physical change in these organs, and their functioning is disordered in the most positive way.

The following case will serve to illustrate my point:

M. R., aged 31, single. Menstruation began at thirteen and continued regularly and without pain until some time between 16 and 18 years of age, when she first manifested a condition of delirium at her monthly periods. Her abnormal menstruation was persistent. When between 25 and 26 years her menstruation was accompanied by still more pronounced disturbance of this function, and greater mental alienation in the way of inability to concentrate her thoughts and a confusion of ideas. When at the age of twenty-eight there was observed at her periods a twitching of the lower limbs a short time before the appearance of her flow. This lasted during its continuation, and for a week afterward.

With each recurrence these attacks increased in severity, gradually involving the upper extremities in clonic spasms. A year prior to operation she began to lose consciousness during the attacks. Occasionally between her periods she had muscular twitching, which always passed off in a few hours. Until this time the invalid had been able to attend to light duties in connection with her home.

For eight months prior to the operation she was totally disqualified for all duties, mental and physical, indeed was bedridden.

Upon admission to the hospital, May 18, she was in a most debilitated and anæmic state physically, associated with well marked mental aberration. Her look was confused, there was momentary stupor, she became convulsed, her head was thrown back, muscles were rigid, pupils contracted, skin moist, urinary secretions scanty, respiration increased, temperature normal. When the attack was over she stated, on being interrogated, that she remembered nothing about the attack.

An oophorectomy was performed May 21. The ovaries were found to be relatively small and perfectly normal. June 9, no recurrence of spasms, her mind clear and active. June 27, patient has entirely recovered from operation and has no

neurotic symptoms. Five months have elapsed since the removal of the ovaries. She is restored mentally and physically to a state of health.

There was no neurotic family history in this case.

Her troubles began coincidently with her earliest menstruation. At first they simulated the aura. The attacks accompanied her ovulation for eighteen years, growing year by year worse, until she was upon the brink of ruin, both as to mind and body.

The ovaries on removal gave all the appearances of being normal.

Dr. J. Whitridge Williams—I have listened with interest to the conservative views expressed by Dr. Ashby regarding the removal of the uterine appendages for psychical disorders, and wish to add my voice to his in condemning the indiscriminate castration of women under all sorts of pretexts. Unless we are able to diagnose the pathological lesion of the tubes and ovaries, we would not think of attempting to remove them either for the relief of pain or as an experimental measure in psychical disorders. For it is only when they present a marked pathological lesion that we can be at all sure of our results after operation, and we are liable to be accused of reckless surgery if we remove apparently normal organs purely for the cure of some evil, of whose cause we are yet in ignorance.

Recent work on the nerves of the ovary gives us more of a basis upon which to base the doctrine of reflex ovarian disturbances, for Von Herff has shown that the ovary contains nerves, which supply all parts of the organ. These are so abundant that he states that they not only are present in large quantities, but that they may be said to compose a considerable portion of the bulk of the ovary.

WILLIAM S. GARDNER, *Secretary*.

Correspondence.

A CASE OF POST-PARTUM HÆMORRHAGE.

PLEASANTON, Texas, December 11, 1892.

Editor New Orleans Medical and Surgical Journal—I have read with great interest and profit the article on post-partum hæmorrhage, by Dr. Roger Williams, and the discussion following by the various members of the Allegheny Medical

Society, in the November, 1892, issue of THE NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

There is certainly nothing to be more dreaded than this accident in the puerperal chamber, and too much can not be said or written on this subject, though it be as old as the practice of medicine itself, especially such practical articles as that by Dr. Williams.

My lot has been cast mostly in the country, so that it has been impracticable for me to regularly attend any medical society, and my main means of keeping abreast with the times is through the journals of our art, and the discussions of the various societies is my favorite and most profitable reading.

The article alluded to above was intensely interesting to me, especially as I had passed through an experience of the kind only a few months previously. Country practitioners justly claim that they are frequently called upon and expected to do operations and treat cases that in a city no one physician would attempt, but in a case of post-partum hæmorrhage, our city brothers have no advantage over us, for what is to be done must be done quickly—no time for consultation, or sending for instruments or medicines that should have been in the obstetrical bag.

On the night of May 7, 1892, I was called to see Mrs. D., a multipara. On arriving I found her in the first stage of labor, os slightly dilated, bag of waters protruding from the os with each pain. Abdomen was very large, which on palpation I decided was owing to the large amount of amniotic fluid present. I anticipated no extra danger, as her history of previous confinements was good. The first stage progressed rapidly, and in two hours the os was fully dilated, when the membranes ruptured spontaneously. On immediate examination I found I had a funis presenting, with the head rapidly advancing in the first position. I explained to the family that there was no extra danger to the mother, but they might expect a still-born child. The pelvis was well formed and roomy, so I endeavored to replace the cord between pains, which were now coming on fast and strong; but with every pain down came the cord, and in consequence of the after coming head was completely strangulated. I replaced as best I could between three or four pains, and as it did no good, in the interest of the child I easily adjusted forceps and delivered, hoping to save it, as this condition had only lasted a short time. The child, however, was inanimate, and all efforts to resuscitate it were unavailing.

Immediately after delivery I gave a dose of ergotole (which is my favorite preparation of ergot), and delivered the

placenta by Crédé's method without any difficulty. Everything as regarded the mother so far was all right.

I turned my attention to the child again at the solicitation of the father, and while not out of the room was probably absent from the bedside of the mother some ten minutes. On returning to her I found the abdomen as large or larger than before delivery. Hastily giving a dose of ergotole, I introduced my right hand into the vagina, and with two fingers in the uterus turned out the clots. Manipulating externally with my left and continuing to empty the uterus with my right, I soon established a good contraction. I continued these manipulations until the uterus was well retracted into the pelvic cavity, and felt firm and hard through the abdominal walls. How long it required I know not, but to be sure the contraction was permanent I gave another dose or two of ergotole.

Everything went apparently well for a couple of hours, when suddenly the uterus again began to fill, and the hæmorrhage externally was also profuse. I pursued the same tactics as before and succeeded again in controlling and getting good contraction. I never turned my "*hold*" loose for the next four hours, but had some one present to administer ergotole and vibur. prunifol. comp. as I deemed necessary. I use antiseptic and aseptic precautions in all surgical and obstetrical cases. Outside of a few days of special weakness, my patient made an uneventful recovery, and is now enjoying her usual good health.

One or two words more. I have found ergotole the most reliable of all preparations of ergot, either hypodermatically or per orem. Also vibur. prunifol. comp. does all that is claimed for it, and for after-pains is *par excellence*.

E. L. SHARPE, M. D.

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AUGUSTUS McSHANE, M. D

COLLABORATORS:

DR. F. W. PARHAM,

DR. H. W. BLANC.

DR. A. W. De ROALDES.

DR. R. MATAS.

DR. JOHN DELL'ORTO.

Editorial Articles.

NATIONAL QUARANTINE.

In a previous issue of the JOURNAL we maintained that the control of quarantine defences should be regarded as one of the functions of the Federal government. The recent experience at the port of New York sent a shudder throughout the whole country, and did more than anything else to direct public attention to the shortcomings of the average State quarantine defences and to crystallize public sentiment into a demand for national control of matters pertaining to the exclusion of epidemic diseases. It is gratifying to the advocate of Federal control to know that a carefully prepared bill has been presented in the United States Senate by Mr. Raynor, of Maryland. It will not prove such pleasing news to the rabid defender of State rights. State rights are good enough in their way, and should be maintained when reason shows very clearly that the general welfare is best subserved thereby; but when something develops beyond local importance and oversteps State lines, it is time for the people of a State to recognize the changed condition of affairs and gracefully delegate its powers

to the general government, to be exercised in such a manner as to redound more to the benefit of the individual States than if the latter had exercised them.

It is easy enough for the interior States to delegate control of quarantine matters to the general government, for they have practically no quarantine system and few offices; they are the States that chiefly clamor for national control. The seaboard States have been compelled to take an active interest in quarantine, and from them will doubtless proceed whatever opposition may arise.

The position of Louisiana is unique. If any State has any right to oppose national control, Louisiana certainly has; and the Board of Health has already taken steps to preserve to the State the quarantine powers it now enjoys. Louisiana has worked out the most satisfactory solution of the quarantine problem—that is, effectually to exclude epidemic disease without imposing onerous or prohibitive restrictions upon commerce. We may be pardoned a little pride in recalling that our State, one of the poorest in the Union, was able, unassisted, to devise and inaugurate a system of maritime sanitation that remains unequalled for thoroughness and efficiency. The experience of the past eight years has proved the ability of what is known as the Holt System to prevent the introduction of communicable diseases. This system was introduced under many difficulties by Dr. Jos. Holt, and it has been maintained and improved by his successors in office, so that, as it now stands, it serves as a model for all quarantine establishments.

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On March 24, 1892, Mr. Harris introduced a bill into the United States Senate: "A bill granting additional quarantine powers and imposing additional duties upon the Marine Hospital Service." It was read twice at the last session of Congress, and reported with amendments at the present session, December 22, 1892.

This bill has been pushed very vigorously, and has, in a great measure, eclipsed the Raynor bill. The Harris bill was born in the haste caused by the dread of importing cholera. It is a quarantine bill, nothing more. The Raynor bill is more comprehensive, and includes quarantine among its features; it

is a great stride toward the proper recognition of medical matters by the general government. While the Marine Hospital corps undoubtedly consists of men who are upright and inspired by motives of public good, we fear that the exercise of the powers granted by the Harris bill will lead to a repetition of the quarrels and bickerings that did not lend grace and beauty to the recent fight against cholera at New York.

If the Raynor bill can not be passed in its present shape, we hope that the Harris bill will be so amended as to embrace the main features of its more comprehensive rival.

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There is a dread among the people of Louisiana that the contemplated national sanitary body will use its powers for sectional or partisan purposes. A little reflection will show that such a fear is groundless. When the national council shall recommend to the executive that measures be taken to exclude a disease that rages epidemically in other countries, the decree ordering the quarantine must resemble a congressional enactment in this respect: that it applies with equal force in all places within its jurisdiction. If danger from cholera be imminent, the council can not recommend that New Orleans be closed against the infected countries while New York or some other port is allowed to maintain communication with them. That is virtually the only way in which favoritism or unjust discrimination against certain ports can be shown. But what effect would such a course have upon the public mind? One point of entrance closed, but others left open for the pest to enter at its pleasure. It is absurd to think that such men as would be selected to form the council could commit themselves to such a glaring puerility. A proclamation of national quarantine would be as broad and as impartial as any of Uncle Sam's enactments. The proclamation would bear uniformly upon all, and would not break out in spots. The talk about unjust discrimination is all twaddle.

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At present, New Orleans is the only port that is adequately provided with quarantine defences. We submit that there are several other ports that are not so provided, though

they ought to be; for instance, New York, Boston, Philadelphia, San Francisco, Savannah, Richmond, Galveston, Pensacola, Mobile, Tampa, etc. One door (New Orleans) is guarded against disease; more than a dozen doors are unguarded. Does a knowledge of that fact tend to allay the fears of the inhabitants of the interior States? It is idle to say that these people should have no voice in the management of quarantine affairs; for, if an epidemic disease once gain an entrance into the country, the interior States will suffer just as severely as those on the sea coast, since communication by railways and rivers is so free that disease germs can be transported many hundred miles within twenty-four hours. The seaboard States may say, very magnanimously: "We will protect the country at our own expense;" but the protection they afford is of a variable and indeterminable character. How small that measure of protection is may be gathered from the failure of the State defences at New York, our greatest port, to prevent the entrance of cholera; and most of our ports are even worse off than New York in the way of fighting pestilence.

The exclusion of epidemic diseases is a matter of national importance, and can not be safely left to the care of the individual States. Not only is thoroughness of treatment required, but uniformity as well, that a full measure of protection may be afforded all along our boundaries. At present, we lean on a broken reed if we trust to the slipshod methods of most of the States. National control of quarantine is a necessity, and we must have it.

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We said above that public sentiment on the question had assumed definite shape in the Raynor bill. The bill is based on the general outlines of the Constitution of the United States: Federal powers are created and defined, but State powers are not rudely brushed aside.

The national bureau and the State boards can render mutual assistance. The powers of the new bureau it is designed to create are very clearly laid down, thus closing the door against encroachments and conflict of authority, which were the shoals on which the late unlamented National Board of Health was wrecked.

In Hamburg several sporadic cases of cholera have recently developed in spite of the cold weather. The danger is not over; the contagion is not destroyed, but merely bottled up, awaiting the return of warm weather and the resumption of traffic to carry havoc to this and other countries. Not many weeks remain of the present Congress; it will cease to exist on the 4th of next March, but between now and then it will have time to pass a measure vigorously demanded by all intelligent people and destined to bear mighty fruits.

DEATH OF MR. JOHN JOHNSON, CHEMIST OF THE CHARITY HOSPITAL.

On December 2, 1892, the profession of the city was shocked to hear of the sudden death of Mr. John Johnson, for many years chemist of the Charity Hospital. We will, in a later number, give a biographical sketch of the deceased.

Abstracts, Extracts and Annotations.

MEDICINE,

CASE OF HYDROPHOBIA FIVE YEARS AFTER HAVING BEEN BITTEN.

By JOHN IRVING, M. B., C. M. Glas., Surgeon to the Huddersfield Infirmary.

H. L., aged 17, was admitted to the Huddersfield Infirmary with symptoms of hydrophobia about mid-day on September 5, 1892. He had been bitten near Shepley, a country district, by a mad dog (foxterrier), on August 1, 1887. A brother and neighbor were bitten at the same time. The bite was on his left hand, his brother being bitten on the wrist and arm more severely. All three went to Paris on August 5, and stayed there until August 19, being treated by Pasteur. On October 4 his brother was admitted into the infirmary suffering from hydrophobia, and died on October 5. His age was 26.

Since the bite H. L. has been perfectly well, with the exception of lymphangitis of his left arm two years ago, for which he was treated by Dr. Alister Macgrègor, who traced

the mischief on that occasion to a deep scratch from a rusty nail; the inflammation soon subsided, although at the time the lad's mother was deeply concerned, thinking it was the result of the dog's bite three years previously. His parents stated that he first complained on August 31 of pain about the neck and back of the head: he thought it was a cold, but as Dr. A. Macgregor, the family medical attendant, has kindly supplied me with an account of the illness previous to his admission to the infirmary, I give it in his own words. He writes:

"I was called to see H. L. on September 4. On arriving at his house I met his father outside the door, and he said to me that his son was sleeping on the hearth rug, and that I should not wake him, as he had been very violent. He went on to explain that on September 1 H. had complained of a pain in his left shoulder and in his back, which pain steadily grew worse, much to his father's alarm, as his other son F. (who died of hydrophobia five years ago) had been taken the same way. They bathed the shoulder, and the pain in it disappeared on the morning of September 4, although the pain in the back (where M. Pasteur had inoculated) still remained, though not so severe. During this time the lad seemed out of sorts, but took his food very well, and showed no aversion to fluids. On September 4, at dinner time, he had taken some food, when, on beginning to drink some beer, he was seized with a spasm, and said the beer stuck in his throat, and he could not swallow it. Immediately afterward he began to look very wild, as the father expressed it. The poor parents were very much alarmed and sent for me. After hearing this history I entered the house and found the patient lying on the hearth rug, apparently sleeping. I had hardly sat down when he wakened and spoke quite sensibly to me—so sensibly, in fact, that I formed the impression that the parents (who had never really got over the death of the other son) had got needlessly alarmed about him. H. told me that the pain in his shoulder and back had kept him from sleeping for three nights, but that he thought he could sleep a bit now that the pain was rather better. He said he 'didn't ail so much now.' On questioning him about his appetite, he said that some beer he had had at dinner had upset him, so that he could eat no more, but on my asking him if he could drink some milk he said: 'Oh, yes, I think I can.' He had by this time got up and sat in a chair, and when the milk was handed to him he took the mug quite calmly and proceeded to drink it. Hardly, however, had it touched his lips when a violent convulsion seized him in his arms, and with a groan he flung the mug away. I said to him: 'Come, now, H., try again and see if you

can't drink some.' He said 'I'll try.' Then he braced his shoulders back and made a convulsive grasp at the mug handed to him, but directly he tried to swallow it his eyes gleamed fire (exactly like a cat's in the dark); his features worked convulsively; he tried to gulp the milk down, but it all came back; he let the mug drop, and with a peculiar weird cry sank back in the chair. He immediately afterward showed signs of becoming very violent, so I injected half a grain of morphine subcutaneously, and got him put to bed. At midnight (that is, about 8½ hours afterward) he was sleeping calmly, but about 6 A. M. on September 5 he was seized with convulsions. On my visit at 8 A. M. I again injected half a grain of morphine, which quieted him until he reached the Huddersfield Infirmary. On the journey he seemed quite easy; in fact, on arriving at Huddersfield he said he had had a very pleasant ride. While waiting in the cab at the infirmary gates he said he felt very hungry; but when some beef tea was offered to him he became violently convulsed. I shall never forget the scene when the poor lad was saying 'Good-bye' to his parents, brothers and sisters; it was really most heartrending. He realized fully on Monday morning (September 5) what was to be his fate; but always previously his father told me he had made very light of his dog bite, and said it did not bother him much, so that in his case at least morbid glooming was not the exciting cause of the hydrophobia symptoms. The other lad who was bitten by the same mad dog is up to now, I believe, quite well, but, as you may imagine, in a fearful state of mind.'

On admission he looked fairly well but rather flushed, and his lips were very dry. He talked rationally, and said that two minutes before the severe attack, on attempting to drink at dinner on the previous day, he had been able to drink quite easily. He was offered some beef tea, but was seized with convulsions, complained of some oppression in his respiration, and a feeling as if there was a lump in his throat. About half an hour after admission he managed to drink a little milk without much trouble, and to eat a slice of bread and butter, but about four hours afterward he became restless and nervous, and sat up on the side of his bed. He was still quite rational, but seemed afraid of the spasm coming on. His tongue was dry in the middle, with a little frothy deposit at the edges. Pulse 120, respirations 36. After a hypodermic injection of half a grain of morphine he became quite calm. There was, however, an occasional sudden respiratory spasm, apparently caused by attempting to swallow some saliva. He was ordered to have chloral by the bowel alternately with the hypodermic injections of morphine, and to be fed by enemata of peptonized milk and beef tea. These were given every four hours. Up

till midnight he was fairly quiet, but with slight respiratory spasm. At 2 A. M. he became restless, and started up in bed several times, and the spasms became more severe. At 4 A. M. he grew worse, and was shouting, foaming at the mouth, and jumping out of bed. He remained pretty much in this condition until 6 A. M., when he quieted down a little, and an hour and a half later took about a teaspoonful of tea, and liked it, although he drank it with great difficulty. A few minutes later he again became much worse, and shouted and threw himself about in bed. Spasm became more severe; there was much foaming at the mouth; he was quite unable to drink, and had a severe attack of spasm when the nurse wanted to wash his face. By 9 A. M. the nurse and his two brothers, who were with him during the night, could not control him. He had to be held down in bed, and struggled very violently, at the same time spitting out large quantities of saliva, and rambling and shouting. He was put under the influence of chloroform, and half a grain of morphine was injected, and his hands, shoulders and feet were secured to the bedstead.

He was kept more or less under the influence of chloroform, and whenever he commenced to come out of it he began struggling and shouting. There were frothing at the mouth, spitting all over the bed and floor, widely dilated pupils, great restlessness, profuse perspiration, violent efforts to get out of bed, vomiting of greenish watery fluid, and some priapism. The saliva was very abundant, and was every now and then sucked into the windpipe, and then violently ejected. At times he would suddenly stiffen the whole body, throw his head backward and to one side, put his features into a half grin, and scream loudly. His pulse was 136, very feeble, and there were abundant coarse *rales* in the chest. Shortly after 11 A. M., on coming round from the chloroform, he was fairly quiet, but was foaming at the mouth, and vomiting mouthfuls of saliva and mucus continuously, which he spat all around his bed. The respiratory spasm became worse, and caused more sucking in of the saliva into the trachea, and somewhat cyanosed him. The pulse rose to 180. An hour and a half later he was still very restless. He had intervals of apnoea lasting sometimes about half a minute, when he became rather cyanosed, and then the respiratory spasm came on. He was still vomiting and spitting out large quantities of saliva. He continued to ramble, and threw himself about as much as the straps would allow him, and became gradually weaker. The respiratory spasm also became worse, and the cyanosis also increased, whilst the vomiting became more frequent. Shortly after 2 P. M. the cyanosis was more or less continuous. The pulse was only just perceptible at the wrist. He was still bringing up mouth-

fuls of saliva, but did not spit it out, but allowed it to run out of his mouth. He still rambled a little, and moved his head about. At 2:30 he died, little more than forty-eight hours after the commencement of the serious symptoms.

The temperature reached 101.2 deg. F. The specific gravity of the urine was 1025, and it contained a fair quantity of albumen. At the *post-mortem* examination the brain and lungs were found very much congested.

I am indebted to Mr. Cholmeley, assistant house surgeon, for notes of the patient's condition whilst in the infirmary.

MICROSCOPICAL EXAMINATION.

Dr. Sims Woodhead, Director of the Laboratory of the Royal Colleges of Physicians and Surgeons, has made an examination of portions of the central nervous system. Unfortunately, owing to some postal misunderstanding, the specimens only reached his hands after a somewhat long interval. Dr. Woodhead's report is as follows:

"The cord, medulla oblongata, and portion of cerebral cortex was somewhat softened, at one or two points almost creamy; the surface of each piece was blanched, but on making sections at various levels there appeared some evidence of congestion, especially of the gray matter of the piece of the cortex, of the medulla, and of the anterior horns of gray matter of the cord in which the small vessels, especially those running from the pia mater, are considerably engorged. In the floor of the fourth ventricle, just at the lower angle at the entrance of the central canal, there is a very minute hæmorrhage, or what may be mistaken for one, for it is possible that this appearance may be due to the diffusion of pigment from a distended blood vessel into a softened area. The same remark applies to several similar patches found on either side of the raphé in the motor area higher up in the pons. On account of the almost diffluent condition of some parts of the specimens, it is difficult to make out anything further. The tissues have since been kept in strong methylated spirit, changed repeatedly in order to harden them as much as possible. Pieces were then embedded in celloidin, and with difficulty a few fairly good but thick specimens of the medulla and pons at various levels and of the cortex cerebri have been obtained. These stained in Ehrlich's hæmatoxylin and then with benzo-purpurin, cleared up with clove oil and mounted in xylol balsam, show the following appearances.

"In the medulla and pons, beyond extreme granularity of the cells of the olive and of the ganglion cells of the nuclei, some congestion and dilatation of the smaller vessels, slight distention of the perivascular spaces in which a few leucocytes

could be found, there is nothing abnormal. There is no evidence of hæmorrhage near the median line (mentioned above), though there are localized patches in which the congestion appears to be much more marked than on the general surface. In the piece of the cortex there are far more evident changes. The vessels of the pia mater are distended, though here and there the spirit seems to have caused them to contract and so to drive out the blood. In and around the larger vessels, both those near the surface and those in the deeper layer, there are marked evidences of acute inflammation. Attention is at once drawn to large accumulations of leucocytes which occur just at the points of bifurcation, especially of the veins. The perivascular lymph spaces are considerably distended, even when they are not filled with leucocytes. At one or two points where putrefaction changes have set in, it appears as though some of the vessels had actually given way, but it is impossible to determine this with any degree of accuracy. Here, as in so many cases of hydrophobia, the histological changes in the nerve centres are little characteristic of the disease. I have seen much the same appearances as above described in cases of acute mania, in 'acute congestion' of the brain, and in a case of acute tetanus, so that I am afraid there is little here to help to make a more accurate diagnosis than has already been able to be made from the clinical history of the case."—*British Medical Journal*.

THE THERAPEUTICS OF DAMIANA.

It may be allowed to preface this short account of the therapeutic action of this, as yet, little used drug with a statement of some other items of information regarding it. Synonyms: *Turnera diffusa*, *T. aphrodisiaca*. It is a plant of the order *turneraceæ*; habitat, tropical America, from Mexico to Brazil; part used, the leaves. Botanical characteristics are uninteresting; suffice it to say that it is a plant of the wild mint kind, with strong, disagreeable, "sagey" odor and taste. It has been used by the natives, particularly of Mexico, as a stimulant and restorative, in much the same way as cocoa leaves were further south, in Peru and Bolivia, after prolonged exertion or to prevent further fatigue. Particularly in western Mexico, according to the evidence of Spanish missionaries so early as 1699, was a decoction of the leaves, with sugar as a flavoring agent, in high repute, not only for the purposes mentioned, but as a specific for sexual impotence in both sexes. In 1874 the drug was introduced to the profession in America by Dr. John J. Caldwell, of Baltimore, and extensive experiments since made by skilful practitioners in a great variety of cases

would seem to have quite established the value of the drug as a stimulant and tonic of the genito-urinary system in particular, and of the functions, at any rate, of the cerebellum and spinal centres in general. A summing up of the results of the observations of nearly forty practitioners in various parts of the United States, with reports of cases appearing at various times, mostly in the columns of the *Therapeutic Gazette*, may be interesting.

First of all, a case of poisoning by damiana displayed tetanic convulsions and other symptoms identical with those of strychnine, and was finally cured by the treatment usual in strychnine poisoning. Exhibited in therapeutic doses, the difference between the two seems to be mainly the slower action of damiana, results accruing usually not within a fortnight to any marked extent, but being very noticeable after that time in most cases. The action of the active principle seems to be mainly upon the spinal and medullary centres, and to be not so much stimulant, because present in the lymphabulum offered to the ganglion cells, as alterative, inducing exhausted or irritable cells to assimilate the nutriment presented them. The theory is suggested by the slower onset and more tonic effect of the action of the drug. It is supported by further clinical effects. The influence of the drug on the bowels is the causation of the mushy stools, one or two a day, which result from heightened peristalsis, due in its turn to better action of the spinal centres and the sympathetic system. Damiana alone has corrected most effectively the habitual constipation of neurotic subjects who were the victims of sexual perversion.

The mint or buchu-like qualities of the leaf show themselves in the increased diuresis attending its use; this effect is probably partly local upon the renal epithelium and partly vascular, as its sedative and tonic effect upon the heart and vascular system is in some cases of functional disturbance equal to that of *cactus grandiflorus*. The local effect of the active principle as found in the urine has frequently been very valuable in cases of irritability of bladder and urethra, such as often accompanies prostaticorrhœa or spermatorrhœa. The majority of successful reported cases have been males, suffering from various forms of impotence or insufficiency in the act of sexual congress, not accompanied by any extensive organic lesion, but due to excessive indulgence, onanism, or masturbation. Several cases are reported of impotence following on spinal shock, as that sustained by a fall or blow, which were very effectively remedied. Many cases had resisted all ordinary treatment, both local, with bougies and stimulating applications in the prostatic and other regions, and general, with phosphorus, strychnine, cantharides, iron, hygienic and dietetic measures; but in a fortnight or a month's time showed grati-

fiying improvement on damiana. The flabby and atrophied condition of the testicle often seen, or the milder condition of abnormal tenderness, especially at the back of the testicle and in the prostate, as the result of sexual excess, promptly disappeared. Even the organic effects of gonorrhœal inflammation of the prostate, vesiculæ seminales, and testicle have in some cases shown a degree of improvement that could be attributed only to the use of damiana, as rest and regular treatment of such cases had failed to do them the desired good. As a sedative in acute cases it has not been proven to have much value; but as a nerve tonic, with an especial effect on the genito-urinary apparatus, it is a decided success. One authority on its use remarks that "the idea that the agent is a direct stimulant of erotic desires is without the slightest basis. In several cases of abnormal sexual appetite it has acted as a calmative, relieving the trouble by imparting tone and vigor to the sexual apparatus."

In some cases of paraplegia and hemiplegia, and of atony persisting after long illness, the tonic effects of the remedy upon the spinal centres have been very marked, quite equal to those of strychnine and ergot. It would seem that here again we have an instance, even allowing for the first flourish of trumpets with which a new remedy is generally heralded in, of a drug that might well be in much more common use, and another instance in which the American School of Eclectics, by introducing new remedies, does a service to the profession at large.

The standard preparations, apart from various elixirs and combinations with phosphorus, strychnine, etc., and pill and tablet combinations, made by firms such as Wyeth, Parke, Davis & Co., are a fluid extract, $\frac{1}{2}$ dr.; a solid extract, 5-15 gr.; powdered extract, 5-15 gr. A tincture is also made. Of the fluid extract the dose may be pushed up to a tablespoonful three times a day, best given in milk, or with equal parts of pure glycerine, syrup of tolu, or some other fruit syrup.—*Canadian Practitioner*.

CAPILLARY BRONCHITIS.

For bronchitis of children, Dr. Jos. H. Hunt, of Brooklyn, L. I., has been, since 1876, using potassium bichromate. He says: "Though seventeen years have elapsed, I well remember the child as it lay then, breathing at the rate of ninety respirations per minute, pulse too rapid and feeble for me to count, countenance cyanosed, veins of forehead and neck

prominent and turgid, and a cool moisture covering the little sufferer's body. The child was suffocating and seemed to be dying. I called for consultation, and my friend, Dr. Alexander Hutchins, responded. He produced from his pocket a powder, telling me it contained one grain of bichromate of potassium, triturated with nine grains of sugar of milk, directing me to place it in a tumbler with twenty teaspoonfuls of water; and give of the solution a teaspoonful every ten minutes until the symptoms were modified. That was in the evening, and in less than two hours the symptoms of suffocation were so much relieved that I was enabled to leave the child for the night, with directions that medication should be kept up at one hour intervals. The change in the condition of the child when I visited it the next morning was surprising. The respirations had dropped to less than forty; the child had been able to sleep and take some nourishment; the cough, which before had been dry and barking, had become looser, and the lung, which the night before hardly admitted any air, was now filled with loose bronchial rales. The aspect of the case was changed from that of a child evidently dying from what we then called capillary bronchitis to a plain case of bronchitis, which went on to successful recovery. * * *

I have not kept histories of cases, and can, therefore, only generalize and say that for the last fifteen years bichromate of potassium has been my principal agent in treating this class of diseases in infants and young children. In medicinal doses it is practically tasteless, and in my hands more efficacious than the nauseous chloride of ammonium which most of us use in about the class of cases in which I use the bichromate. The experience of my first case has been more than once repeated, though it took a second case almost as bad as the previous one, to which I again called Dr. Hutchins in consultation, with an equally gratifying result, to give me the confidence in its utility which I now have. * * * I find it taken and borne readily by the youngest infant, unless given within a few minutes of feeding with milk, with which it seems to be incompatible, so that when the administration of the medicine is at very short intervals, milk feeding must be, for the time, suspended. I am accustomed to give it to a child one year old in $\frac{1}{20}$ grain doses, at first, at frequent intervals, when the symptoms of suffocation are distressing or the breathing very rapid; I administer a dose every fifteen or thirty minutes until I see some amelioration of the symptoms, and then diminish in frequency to one hour intervals. If the interval is prolonged more than one hour the effect seems to die away.—*Brooklyn Medical Journal.*

SURGERY.

REMARKS ON THOROUGH OPERATIONS FOR CANCER OF THE
FEMALE BREAST.

By W ROGER WILLIAMS, F. R. C. S. (ENG.), Late Surgeon Western General Dispensary
and Surgical Registrar, Middlesex Hospital.

The unwritten principle underlying the operative treatment of cancer is, that if we completely extirpate the disease the patient will be radically cured. The increasing proportion of cures obtained by modern thorough operations strengthens us in this belief. The good results of thorough operations for cancer have nowhere been more decisively manifested than in the female breast (Banks, Gross, Küster, etc.).

At first sight, extirpation of a cancerous mamma seems to be a very simple affair; yet nothing is more certain than that in the great majority of such operations, even as done by experienced surgeons, this result is not obtained—fragments of the gland and of the disease are generally left behind. Of course, operations thus conducted are never really curative. Hence the supreme importance of paying attention to certain anatomico-pathological facts—now generally neglected—without knowledge of which it is impossible to perform the operation effectually. These are as follows:

1. In cases of mammary cancer the whole gland is diseased, and must therefore be removed. In many parts of the body, such as the buccal cavity, the outbreak of cancer is commonly preceded by obvious hyperplastic changes (ichthyosis) of the surface epithelia. Moreover, it is noticeable that these lesions are seldom limited to the precise starting point of the cancerous disease. This clearly implies that the abnormal activity, which at a given spot culminates in cancer, affects in a less degree the adjacent epithelia of the region for a considerable extent. The question arises whether all parts of the body in which cancer occurs are not similarly circumstanced. The indications up to the present forthcoming are decidedly in favor of an affirmative answer. The admirable researches of Heidenhain* have, at any rate, answered the question in this sense for the female breast. He has conclusively shown that every mamma containing a cancerous tumour is diseased throughout. Its secreting cells are unduly numerous, and they everywhere show signs of excessive reproductive activity, while the periacinous connective tissue is much increased, and infil-

* "Ueber die Ursachen der lokalen Krebsrecidiven nach Amputatio Mammæ,"—*Archiv f. klin. Chir.* Bd. XXXIX., 1889, s. 97.

trated with small round cells. These results have recently been confirmed by the observations of Messrs. Johnson and Beadles.* It is impossible to doubt that parts in such a condition are more prone to originate cancers than perfectly normal structures. Heidenhain is evidently right in maintaining that proliferating acini of this kind, left behind at the primary operation, are the germs whence most late recurrences arise.

2. Having thus shown the necessity for removing the *entire* gland, I will now refer to certain facts which must be kept steadily in view in order to effect this object. The female breast is normally a very imperfectly integrated organ; like the lachrymal and salivary glands, its constituent lobules, instead of being compacted together in a small space, are generally widely diffused, and often some of them are completely sequestered. On this subject Sir Astley Cooper† remarks: "The margins of the breast do not form a regular disk, but the secreting structure often projects into the surrounding fibrous and adipose tissues, so as to produce radii from the nipple of very unequal lengths; hence a circular sweep of the knife cuts off many of its projections, spoils the breast for dissection, and in surgical operations leaves much of the disease unremoved."

Anatomists commonly describe the female mamma as a flattened circular mass, but this is a very misleading account of it. The truth is, as Hennig‡ has so well shown, the fully developed female mamma has normally a tricuspid form, two of the cusps project toward the axilla—an upper and a lower one—and the other toward the sternum. The upper of these two axillary mammary extensions is very often prolonged round the border of the pectoralis major muscle, right into the axilla; and the same occasionally happens with the lower one. The sternal prolongation sometimes reaches as far as the edge of the sternum, which it occasionally overlaps. In the ordinary operation of amputation of the breast, these processes are almost invariably cut off and left behind. The mamma is embedded in fibrö-fatty tissue, which forms a thick layer anteriorly, but posteriorly it is generally defective. Here all that intervenes between the concave base of the gland and the sheath of the subjacent pectoral muscle, generally is some loose areolar tissue. In this outlying glandular processes may nearly always be found, which, according to Heidenhain, not only adhere to the subjacent muscular fascia, but often penetrate it, and even become embedded in the muscle itself. Here also numerous lymphatics are found. In cases of mammary

* Pathological Society, London, 1892.

† "The Anatomy of the Breast," p. 13. London, 1840.

‡ "Ein Beitrag zur Morph. der weib. Milch-Drüse"—*Arch. f. Gyn.*, Bd. II., 1871, s. 331.

cancer, these structures, as Heidenhain has shown, are nearly always diseased; and at ordinary operations they are almost invariably left behind. Heidenhain found, on careful examination after removal, that the disease had not been completely extirpated from this situation in 12 out of 18 breasts consecutively amputated for cancer; and he predicted recurrences, which soon followed. To obviate this he recommends that the fascia over the pectoral muscle, together with a layer of the subjacent muscular substance, should be removed in every case; and I certainly think his recommendation ought to be regarded as an essential feature of the operation.

3. In the vicinity of the mammary gland, completely isolated supernumerary mammary structures are of very frequent occurrence.

I have elsewhere shown* that these redundant structures are very prone to originate neoplasms—14 per cent. of all so-called adenomas of the breast, and 9.8 per cent of all its cancers, arise in this way.

Two varieties of the condition may be recognized—a commoner one, which is simply the result of sequestration, and a rarer one, of atavistic origin (true polymastia). Structures of this kind, left behind after operation, sometimes originate late recurrences.

To be able to remove them effectually we must study their distribution. This is best done by noting the positions of the neoplasms that have sprung from them. Of 29 such cases, 19 of which came under my own observation, in 15 the tumors were *axillary*, in 8 they were *sternal*, and in 6 they were situated *above* the breast.

In this connection it may be mentioned that cancerous tumors are more prone to develop in some parts of the gland than in others. Its periphery, for instance, is a much commoner seat of the disease than its central part. Of 132 cases under my observation, in 90 (68 per cent.) the tumor was peripheral, and in 42 (32 per cent.) central.

Most of the peripheral tumors are met with at the *upper* and *axillary* parts of the gland. Thus, of 90 cases under my observation, the disease was situated in the upper segment in 46, in the axillary in 20, in the lower in 21, and in the sternal in 3. This, in the main, coincides with the results arrived at by Winiwarter and Gross. The latter's analysis† of 256 cases gives 90 for the upper, 83 for the axillary, 51 for the lower, and 32 for the sternal segment.

* "Polymastism, with special reference to 'Mammæ Eraticæ' and the Development of Neoplasms from Supernumerary Mammary Structures."—*Journal of Anatomy and Physiology*, Vol. XXV. January, 1891, p. 244, *et seq.*

† "Clinical Study of Carcinoma of the Breast."—*International Journal of Medical Science*, Vol. I, 1888, p. 219.

4. Here we have to study certain conditions relating to the cancerous neoplasm itself. On careful examination of the periphery of such a growth it will be seen that the passage from the diseased to the healthy tissue is by no means sharply defined; the irregularly growing edge of the cancer is, so to speak, dovetailed into the surrounding pre-existing tissues. On this subject Sir Astley Cooper remarks*—"I would observe that the scirrhus tumor is not all of the disease: there are roots which extend to a considerable distance, and those who gave this disease the name of cancer probably knew more of its nature than we are disposed to give them credit for. It is supposed by some that this name was given on account of the appearance of the surrounding veins. I should rather say that it was from the appearances on dissection than from anything without. When you dissect a scirrhus tumor, you see a number of roots proceeding to a considerable distance, and if you remove the tumor only, and not the roots, there will be little advantage from the operation."

This admirable *résumé* of the subject is entirely in accord with the results of modern research. If we examine the growing edge of a mammary cancer we shall find that one way in which the disease progresses is by the continuous centrifugal extension of ingrowing epithelial processes. These spread most rapidly in the directions of least resistance, which are usually along the adjacent lymphatics and perivascular sheaths. These Koster has found distended with cancer cells. Fine, elongated, cord-like processes of cancerous growth thus arise, which often extend from the tumor far into the surrounding tissues, especially posteriorly. In connection with these, nodular growths often develop, which, to the naked eye, may appear to have no connection with the primary tumor. In addition to these, there are frequently found in the vicinity of the primary tumor, really discontinuous nodules, which are the first signs of regional dissemination. These arise, as Langhans, Waldeyer, and others have shown, from cellular elements detached from the primary tumor, and converged thence by the lymphatics or veins, or by their own spontaneous movements. In addition to the foregoing, small discontinuous satellite nodules are occasionally found in the vicinity of the main tumor, which arise as spontaneous outbreaks of the disease in outlying proliferating acini. To avoid these sources of danger, the incision for the removal of the disease must evidently be carried as wide as possible of the primary neoplasm.

* "Lectures on Surgery," 1839, p. 386.

THE TREATMENT OF APPENDICITIS.*

By DR. CHARLES TALAMON.

As long as appendicitis was called typhlitis and it was believed that the lesions were seated in the cæcum, the treatment remained almost exclusively medical. Indeed, it could not be otherwise, for no one would have thought of incising the large intestine. The surgeon was not called till the pus, after doing more or less mischief internally, came to point under the skin in some part of the abdominal wall, and then it was generally too late to save the patient.

We must, however, remember that thirty-five years ago Dr. Lewis, of New York, recommended an early incision. He had collected forty-seven cases of suppurative perityphlitis treated by the ordinary methods, with only one cure. He logically concluded that these methods were insufficient; that it was not necessary to wait till the pus collected and pointed in plain sight before operating, and that a free opening should be made as soon as the presence of pus in the iliac fossa was suspected.

Twenty years later, in 1875, another New York surgeon, Dr. Gouley, insisted on the necessity of early opening of the abscess to prevent its rupture into the peritoneal cavity or elsewhere. The incision should, he said, be made as soon as the symptoms become threatening, and even before fluctuation is manifest (as early even as the seventh or eighth day). He gave statistics of twenty-five cases of typhlitis occurring in England and America, which were treated by an early incision; of these there were seventeen recoveries and eight deaths.

A more precise knowledge of the causes and seat of the suppuration, and the discovery that appendicitis is so often perforative, naturally gave impetus to the surgical treatment of the disease.

We have seen that as early as 1827, in his remarkable memoir on the diseases of the appendix, Melier had foreseen the part that surgical intervention was to play in the treatment of inflammations of the appendix. "If," said he, "it were possible to make a certain diagnosis of these affections, we should be able to save all our patients by means of an operation. Possibly the day will come when we shall be able to do this."

The prevision of Melier is to-day realized—we may even say exceeded, for surgeons have now attained such a degree of confidence that many (and I allude in particular to certain *American* surgeons) no longer wait for the indications formulated by the more conservative authorities, but propose an immediate laparotomy for every case that presents itself.

*Extract from a volume to be published by G. S. Davis, entitled "Appendicitis and Perityphlitis."

Naturally there has been a reaction against this zeal for the use of the knife. To the triumphant statistics of the surgeons, the physicians have replied by statistics no less decisive; for instance, those of Guttman, where out of one hundred cases recorded as typhlitis and perityphlitis the medical treatment gave ninety-six (96) recoveries and only four (4) deaths.

We do not believe that this question can be decided by an appeal to statistics, for we never know how many mistakes statistics may cover. But in the presence of such figures as the above, even if we should have to admit a large proportion of mistakes of diagnosis and incomplete recoveries, we would still be warranted in concluding that medical means, and even expectancy, are not absolutely valueless, that the bistoury is not always the *ultima ratio*, and that henceforth we may at least try provisionally, in many cases, a less heroic mode of treatment.

This leads us back to the position before mentioned—that there exist divers forms of appendicitis, and that the first duty of the physician is to make a precise differential diagnosis. Yet if we are to judge from the numerous discussions which have taken place in various medical societies at home and abroad, the surgeons, taking account only of cases where their intervention has been required, do not seem willing to admit the existence of more than one kind—namely, perforative appendicitis with peritonitis or suppuration.

Their reasoning seems to me as just as if, from the good results obtained by pleurotomy in purulent pleurisy, one were to conclude that every case of pleurisy is necessarily suppurative, and that the only treatment to be thought of in pleural inflammation is the free incision of the thoracic parietes.

MEDICAL TREATMENT.

We have said that appendicitis may be divided into medical and surgical. The appendicites properly medical comprehend those forms in which the inflammation is limited to the walls of the appendix, or gains by propagation the peritoneal membrane to a certain extent; *i. e.*, appendicular colic, simple parietal appendicitis, and appendicitis with partial fibrinous peritonitis.

The treatment of these kinds is indisputably medical—calmatives, evacuants, local antiphlogistics; we may add intestinal antiseptics.

The indication in appendicular colic is the same as in hepatic or nephritic colic, *i. e.*, to assuage the pain, which is due to the same cause as in renal or biliary lithiasis—the painful contraction of a musculo-membranous tube due to the presence

of a foreign body. The subcutaneous injection of $\frac{1}{8}$ to $\frac{1}{3}$ grain of morphia meets this indication. In allaying the pain, it suppresses or diminishes the muscular spasm and the consequences of the reflex irritation starting in the appendix; and, in suppressing the spasm, it may facilitate the expulsion or return of the stercoral calculus into the cæcum.

The medical attendant will apply at the same time over the abdomen of the patient poultices sprinkled with laudanum. If nausea and vomiting exist, effervescent drinks, menthol, little bits of ice, etc., may be prescribed.

The physician is rarely called to witness an acute attack of appendicular colic. When he reaches the patient, either the severity of the attack is over, or there remain only vague abdominal pains with a sensitive *point douloureux* in the right iliac fossa. Here the attention should be concentrated. If the fixed pain is but little marked, if the abdominal walls are relatively supple, the physician will continue the poultices, perhaps order a full bath, and administer an emollient of oleaginous enema. It would be useless to administer at this time a purgative, which might provoke new and unseasonable contractions and give rise to a second acute crisis by forcing back into the appendix the scybalous concretion now perhaps partly or completely disengaged.

If, on the contrary, there exist local signs of a severe appendicular irritation, if the iliac region is very painful and tender, if the muscular tension over this region is very marked, the application *loco dolenti* of a dozen leeches should be prescribed. It is certain that this local blood-letting always brings great relief; it is probable that it causes a *decongestion* or depletion of the walls of the appendix, at this moment turgid and rigid, as if in erection, as the very early incisions of the American surgeons have often shown.

Profiting by this lull in the pain, the physician may administer a purgative dose of calomel or an ounce of castor oil.

On this question of the employment of purgatives in appendicitis, physicians are divided into two parties: the one favors their systematic administration, the other discards them from fear of favoring perforation. These are extreme positions; there is a proper mean between them.

At the onset it is well to refrain from purgatives, because at this moment the intestine, which is violently excited and under powerful contractions, might force still further into the appendix the coprolith and effect its permanent lodgment there. At this period the fear of favoring perforation is legitimate, as the intensity of the appendicular inflammation is in the ratio of the degree of constriction exercised by the foreign body on the walls of the diverticulum.

But after the depletion produced by the application of the leeches, the danger is much less, and a purgative may even be given with benefit. Not only does it empty the large intestine, which is always a relief to the patient, but it arouses the normal peristalsis of the muscular coats, which, in being propagated to the walls of the appendix (now become less engorged and less tense), may provoke the expulsion of the coprolith from the canal of the appendix.

We would recommend neither drastics, which cause too violent contractions, nor salines, which cause a serous secretion which is too abundant and does no good. Castor oil and calomel, producing milder effects, are more suitable. I prefer castor oil, as it more readily carries along the mass of hardened fecal matters which have accumulated in the colon by the reflex paresis of the muscular coat. My method is to give it in doses of a teaspoonful every half hour or hour till a full stool is obtained.

The days following, freedom of the bowels is kept up by laxative and antiseptic lavements—*i. e.*, lavements to which boric acid or naphthalin is added. To prevent intestinal fermentation and the formation of gases, it is also well to administer by mouth divers substances which favor intestinal antiseptis, such as salol, betol, naphthol and benzo-naphthol.

These means ordinarily suffice to stay the progress of a case of parietal appendicitis.

If a new inflammatory invasion takes place, and especially if this be complicated with the signs of a partial fibrinous peritonitis, it will be necessary to renew the application of the leeches and have recourse to frictions with mercurial and belladonna ointment. Opium may be given at the same time in doses of $\frac{1}{6}$ to $\frac{1}{2}$ grain, repeated two, three and four times a day, to immobilize the intestine and prevent the extension of the serous inflammation. The application of an ice bag to the abdomen also gives good results.

It is understood that from the very onset of the affection the patient must be kept rigorously in bed (dorsal decubitus), on a diet of milk or broths, or light gruel, etc.

The sojourn in bed should be continued some time after the cessation of all local pain. As long as you perceive in the right iliac fossa the little elongated tumor formed by the thickened and dilated appendix, the greatest prudence is indispensable, for it is not rare to see a recrudescence of the disease produced on the occasion of a strain, a violent movement of the patient, or too great haste in quitting the bed (the latter especially).

Ought the medical treatment to be employed in the surgical

forms of appendicitis? I would reply emphatically: No! on condition that we are certain that it is really a case of perforative appendicitis with peri-appendicular suppuration. No one would think of favoring the resolution of an abscess of the subcutaneous cellular tissue by leeches, poultices and mercurial inunctions. It would be foolish to attempt it under a pretext that the abscess is intra-peritoneal.

But we have seen that it is often very difficult, not to say impossible, during the first few days to decide whether the appendicitis is perforative, and whether suppuration exists. During this first period, as long as perforation is not demonstrated, the physician not only can, but ought to, put in practice the means indicated above. If perforation has not yet taken place, there is nothing to prove that this treatment, suitably applied and in time, may not bring about the decongestion of the appendicular walls, and in consequence prevent the ulcerative process which ends in rupture into the peritoneum. On the other hand, supposing that perforation has taken place, it is quite possible that this same treatment—leeches, inunctions, opium and ice—may be capable, not of preventing suppuration, but of limiting the extension of the serous inflammation, and of restricting it to the immediate vicinity of the appendix.

All depends, then, on the moment when the physician is called to see the patient. If at the onset, and at a moment when it is impossible to pronounce with certainty as to perforation, he ought to act as though he thought it a case of simple parietal appendicitis. His conduct will be the same if the signs of a partial peritonitis manifest themselves, nothing yet warranting the belief that it is a case of perforative appendicitis; experience having shown that this peritonitis may be due to a simple propagation of the parietal inflammation, and it may be purely fibrino-serous, consequently susceptible of resolution and resorption.

Having passed the seventh or eighth day, the mind of the physician should be made up. He should not allow himself to be deceived by the temporary lull that takes place at this moment, so as to believe in the definitive arrest of an attack of simple fibrinous peritonitis when it is only a case of the limitation of a suppurative peritonitis which tends to circumscribe itself. The medical treatment then becomes useless, save the administration of opium. It is necessary, at all events, to abstain from prescribing any new purgatives, which can but provoke a new extension of the peritoneal inflammation. The time has come to call in the help of the surgeon.

It is understood that these indications have but a relative

value. It is as difficult to lay down absolute rules for the treatment as for the diagnosis of appendicitis. The aspect and inspection of the patient often teach more than the most minute descriptions. It is certain that there are cases where, as early as the second or third day, one may resolutely affirm perforation; there are others—more rare, it is true—where even at the end of twelve to fifteen days one would scarcely suspect the true nature of the accidents.

The only absolute rule that can be given is the following: The moment the diagnosis of acute perforative appendicitis with generalized peritonitis is made, or of appendicitis with peri-appendicular suppuration, that moment it is time to abandon all medical treatment and summon the surgeon, and let the responsibility of a laparotomy rest with him.

THE SURGICAL TREATMENT.

Here the question presents itself which is always the most debated and which is likely to be debated for many years to come: At what moment should recourse be had to the bistoury?

We may range in three categories the views taken on this point.

1. The old view, that of the temporizers, who take the extreme position that no operation should be attempted until the abscess is ready to burst before your eyes. It has in its support the cases where recovery has taken place after a spontaneous opening and the evacuation of pus, whether outside the abdomen or into the intestine or vagina. But it leaves the patient exposed to all the risks of deep abscesses, to purulent or putrid infection, to general peritonitis by rupture of the abscess into the peritoneal cavity, to purulent infiltration of the subperitoneal tissue and of the muscles, to the propagation of the inflammation to the diaphragm and pleura, to thrombosis of the iliac veins or of branches of the vena portæ, with pulmonary or hepatic embolisms, etc.

2. The extreme view of certain surgeons, who advocate precocious and instant laparotomy as soon as the diagnosis of appendicitis is made. These men support their position by the following arguments: "We never know that an appendicitis will not be perforative; it is better, then, to remove the appendix before perforation has taken place than to run the risks of general or partial peritonitis. Numerous cases have a fatal termination in the first twenty-four to forty eight hours. Observations are not lacking where an operation too tardily performed has failed to prevent a fatal issue which might have been avoided by an earlier operation. Lastly, an operation,

however early performed, is without gravity, and the utility of such operations is being every day proved."

Do these arguments justify systematic surgical interference in the first twenty-four to forty-eight hours? The first argument need not long detain us. We can never, it is true, know that an appendicitis will *not* be perforative, but we are equally in the dark as to whether it *will* be. And, moreover, if we take all the forms of appendicitis as they come, without making any distinction, we know with certainty that in 90 per cent. the disease gets well without the aid of the surgeon, which shows that, as far as the life of the patient is concerned, the immediate prognosis is not so very grave, and that one may safely wait.

Certainly, if one could affirm, from the symptoms presented by the patient, that a case of appendicitis would be perforating in from twenty-four to forty-eight hours, there would be no warrant for hesitation, and it would be the physician's duty to advise laparotomy immediately, before any sign of peritonitis had manifested itself. But, as before said, a positive diagnosis of this kind is seldom or never possible.

Here is an instance of early operation—the earliest that I have any knowledge of, for it was performed just twenty-four hours after the first symptoms appeared. The case is published by Dr. Dalton, of St. Louis. The patient, a vigorous man, aged 33 years, in the hospital on account of sore eyes, was taken suddenly sick, December 25, with a violent pain in the abdomen, referred to the umbilicus. Dr. Dalton saw him three hours afterward, and diagnosticated appendicitis. The next day, just twenty-four hours after the onset of the attack, he operated. The temperature was then 38.8 deg. C., the pulse 116, respiration 32, the pain intense and almost continuous. A semilunar incision three inches long was made over the region of the appendix. The appendix was found running parallel to the cæcum, and adherent to it by a very short mesentery. It was of a dark blue color, almost black, and largely distended—of the size of the little finger. There was not the slightest trace of inflammation between the appendix and the neighboring parts. The appendix was ligated and cut off close to its cæcal origin. On examination it was found not to be perforated at any point; its canal was blocked by a very hard fecal concretion floating in a purulent liquid. Recovery was rapid.

Would perforation have taken place here if laparotomy had not been performed? From the appearance of the appendix this would seem probable, but only probable; for we do not know that in the simple forms which get well by medical

treatment the congestion of the walls of the appendix is not just as intense. But at all events, if we compare the symptoms complained of by the patient with those of simple parietal appendicitis, we find no peculiarity to warrant the belief that perforation was more to be feared than in simple appendicitis. Certainly a fever heat of 38.8 deg. C., a pulse of 120, and an intense and continuous pain in the iliac fossa, are observed at the onset in the most benign forms of appendicitis.

We have, then, we repeat, no means of foreseeing the perforation of the appendix—a prevision which alone would justify an operation in the first twenty-four to forty-eight hours. The position of the partisans of this extreme view would, then, necessitate the opening of the abdomen for every attack of intestinal colic attended with intense pain localized in the right iliac fossa—a rule sufficiently absurd in itself, and which medical men will be very slow to adopt in their practice.

The second argument is that a certain number of subjects succumb as early as the second day of the disease. This number is not as large as one might suppose, for out of 176 fatal cases Fitz could find but 8 in which death took place during the first forty-eight hours. It would seem, moreover, very probable that these cases belonged to the acute form with general peritonitis—a form which is almost certainly fatal and where surgical intervention from the very first would not save the patient. These rapidly progressive cases, being exceptional, ought not to be the basis of a general rule of treatment; in an immense majority of cases the progress of appendicitis is much slower.

As for the third argument, that an operation performed too late is a calamity to the patient and an opprobrium to the surgeon; that is very true, but it does not justify too early an operation. All we can say is, better that it should be early than late.

There remain to be considered the little gravity of the operation, and the good results to be obtained from early laparotomy. Out of 24 cases thus treated by McBurney—6 on the second day, 14 the third day, 2 the fourth day, 2 at the end of a week—there were 23 recoveries and but one death. I would not think of contesting either the progress of aseptic surgery or the facility and safety with which to-day surgeons open the abdomen. But the fact that an operation is not necessarily serious does not justify it if it is not necessary; and we would like well to know in how many of McBurney's 24 cases the operation was indispensable to save the life of the patient.

3. We have now to consider an intermediate position, that

of those who believe in an early operation, but only when the urgency and gravity of the symptoms furnish indications which the reason and judgment of the physician can not well misinterpret. No precise time can be fixed for such "early" operation; the limits vary from the third to the fifteenth day. To discuss whether, as a general rule, it is better to operate before the fifth day, which certain American surgeons insist upon, or after the fifth day, as Treves urges, seems to us unprofitable. We say, once more, everything depends on the case and on the form of appendicitis. The truth is that the distinction which we have established between the highly acute forms with general peritonitis and the acute forms with circumscribed peritonitis should be kept in mind as a guide in deciding whether and when it is best to operate.

In the over-acute forms there is no middle course; either you must operate immediately or leave your patient to die. A diffuse peritonitis caused by intestinal perforation never gets well; to wait is to let your patient become exhausted by the violence of the inflammatory shock, or infected by the putrid products formed in the peritoneum. Besides, it is this over-acute form which kills rapidly—the second, third or fourth day. It is necessary, then, to make haste if you wish the operation (which is the patient's only chance of life) to succeed. The chances for life offered by laparotomy are not very great; it is probable that they are *nil* after the fifth day. Yet there is certainly some chance if the operation is done in time, if the collapse is not too great nor septicæmia too far advanced. The premature interference of the American surgeons has at least established this fact. You can not, then, operate too soon when the symptoms leave no doubt as to the existence of a peritonitis general from the start.

In the frankly acute forms with partial peritonitis, with or without tendency to progressive extension, the urgency is not so great. In fact, in the great majority of cases which have been published, the operation was not performed till in the course of the second week. Hence, the rule given by American surgeons, that one ought to operate as early as the third day, if at this moment the patient does not experience a marked amelioration under the influence of abstinence, rest, opium, purgatives and topical applications, seems to us inadmissible in such cases. We prefer for the acute circumscribed forms Treves' rule: *Not to operate before the fifth day*. But with this reservation understood, it remains to determine what is the most opportune moment to operate.

Now, in our judgment, it is extremely difficult to decide on the fifth day whether or not the partial peritonitis is sup-

purative, or whether it is due to a perforation of the appendix or to propagation of a parietal inflammation. To lay down a rule that the operation should be performed on the fifth or even the sixth day is in reality to act as the American surgeons advise and to perform the operation in all cases that present violent or serious symptoms. It is, in fact, risking a laparotomy for a simple partial peritonitis, which might have got well without an abdominal incision.

One might, without doubt, run this risk of an operation in itself needless (though in reality of little gravity) if in cases where the peritonitis is suppurative a delay of several days exposed the patient to mortal dangers. But do these dangers exist on the eighth or ninth days more than the fifth or sixth? We do not hesitate to reply in the negative, the moment that the peritonitis tends to become circumscribed.

We may even add that in such cases it is even an advantage not to act too precipitately. Besides the fact that this relative temporizing enables us to determine with more certainty the diagnosis of suppuration, it favors the limitation of the focus of suppuration, its more complete separation from the peritoneal cavity, and the formation of firmer adhesions to the abdominal wall. Now, the published observations show that the longer the operation is put off the more easily it is performed; in fact, the surgeon has simply a deep abscess to open. You have only to run over the series of facts reported by Roux, of Lausanne to see that out of 23 cases operated on from the seventh to the fifteenth day there were only 2 deaths—one by embolism, the other by diffuse peritonitis; while out of 12 cases in which the operation was performed from the second to the sixth day, there were 3 deaths. In 2 of these 12 cases (which recovered) the signs of general peritonitis manifested themselves early and made the necessity of an immediate operation sufficiently apparent.

We are, then, inclined to believe that in the acute frank forms with partial peritonitis the most opportune moment for the operation, unless special and urgent indications should present themselves, is after the first week—from the eighth to the twelfth day, during that period of temporary lull, scarcely marked by any fever heat, which follows the first febrile phase of the malady, and which precedes the fever of purulent resorption. To operate earlier is to run the risk of performing a needless operation, as the peritonitis may be simply fibrinous; or even to run the risk of infecting and inflaming the totality of the peritoneum, the protective limiting adhesions not being sufficiently formed or sufficiently resisting. To wait till a later period is (without possible benefit) to leave the pa-

tient to become exhausted and to be exposed to the chances of one of those unforeseen complications which supervene abruptly to aggravate an affection hitherto benign, or indefinitely to prolong its duration.

While this is the general rule as to surgical intervention, it may well be that the progress of the suppurative peritonitis is so rapid that on the fourth or fifth day there is no longer any doubt as to the presence of a purulent collection well limited; in this event one can not do better than to operate at once and no later than the fifth day, as Treves advises. For a greater reason, if the general symptoms are very threatening, indicating an extreme depression or a well marked septicæmia, if the peritoneal inflammation gains rapidly instead of tending to become circumscribed, the operation should not be delayed another day; it is, of course, needless to say that with such symptoms the best surgical skill can not offer much hope.

In the case of children, according to Morton, we should operate earlier than in adult patients, because the progress of the appendicitis in infantile life is more rapid, the tendency to invasion of the peritoneum greater, and the termination more frequently fatal. This is true in the sense that in the infant, as we have said, it is the perforating hyper-acute form, with general peritonitis at the onset, which is most often observed. But it must not be forgotten that we also see in the infant very acute forms which limit themselves to a limited attack of simple peritonitis, and which get well rapidly by purely medical treatment. If, then, the diagnosis of general peritonitis by perforation is not doubtful, resort should be instantly had to laparotomy; but if it is a case of partial peritonitis, the management of the case will be precisely as though the patient were an adult, and the physician will not operate unless he is convinced of the presence of pus.

In the hyper-acute forms, the physician should regulate his line of conduct according the old axiom: *Ubi pus, ibi evacua*. One hardly ever runs the risk of operating too early, as the diagnosis is always tardy. And it is important here to operate the more promptly from the fact that pus tends silently to infiltrate distant parts and to produce in the muscles and neighboring tissues disorders often irreparable.

To sum up: *Theoretically*, surgical interference is indicated as soon as the diagnosis of perforative appendicitis is made. *Practically*, this interference should be immediate in the forms attended with peritonitis which becomes general from the onset; it is the only chance which remains for the patient's life. It ought, in our judgment, to be put off till the

eighth or twelfth day in the forms with partial peritonitis, as the diagnosis of suppuration can not be made certain during the first week, and the chances of recovery seem to us the greater the more thoroughly the purulent collection is encysted.

In the other forms of appendicitis, parietal or complicated with peritonitis by propagation, medical treatment ought alone to be employed—an operation made under pretext of preventing perforation being unjustifiable, considering the enormous proportion of cases which get well without the help of the bistoury.

State News and Medical Items.

CHARITY HOSPITAL.

The board of administrators of the Charity Hospital met in regular monthly session on December 6, 1892, Vice President Dr. Samuel Logan presided and Dr. E. T. Shepard, Messrs. Joseph A. Shakspeare, W. G. Vincent, G. W. Sentell, Charles Seemann, J. R. Brousseau and Hugh McManus in attendance. Secretary Edwin Marks was also at his desk.

Clerk DeMahy reported as follows for the month of November:

Patients in hospital November 1, 684; admitted, 684; foreigners, 216; United States, 468; males, 559; females, 125. Patients discharged, 587; males, 478; females, 109. Patients died, 101; males, 78; females, 23. Patients remaining in hospital December 1, 680; males, 474; females, 206. Daily average of patients during the month, 690. Outdoor clinic, men and boys, 2420; women and children, 1775; total 4195.

The report of the ambulance service showed as follows: Surgical, 53; medical, 10; dressed, 31; conveyed home, 7; obstetrical, 0; died, 5; false, 6; refused, 5; not needed, 3; transfer, 5; total, 126. One pay call, \$10. Average time, 37½.

The financial report for November was as follows: Amount received from gate fees, \$303.40; from burial certificates, \$11.50; from legal certificates, \$3; amount paid over to Sister Agnes, \$317.90.

The finance committee reported the following income during November: From ordinary sources, \$2224.68; cash balance November 1, \$36,472.87; total, 38,707.55. Disbursements: On account of improvements, \$650; ordinary expenses,

\$9528.18; total, \$10,178.18. Cash balance November 30, \$28,529.37. Additionally on hand, account general fund, State warrants, \$10,000; special legacy fund, Whitney National Bank, \$20,000.

Colonel Vincent, of the house committee, reported that a fire brigade, composed of thirty men, had been organized, and that rules governing their operation inaugurated. The matter of a training school would be brought up under the head of new business. The institution itself was reported in excellent condition.

Dr. Logan, on behalf of the committee, suggested the election of the following young gentlemen as extern students: Jeff. Thigpen, S. J. Gates, J. M. Callaway, J. M. Batchelor, John T. Archinard, Clarence Pierson, H. B. Gessner, E. K. Sims, N. C. Lanier, W. J. Emmer, Chas. A. Borey, Sam. McLean, R. F. Miller and U. S. Bird.

The suggestion was adopted and the gentlemen elected.

Attorney General Cunningham, replying to a letter addressed him by the finance committee of the board asking his opinion as to the responsibility of the administrators in the investment of surplus funds, said: "Considering that as attorney general I would necessarily represent the State authorities, and considering that your board has able counsel to advise them, I have concluded not to give my opinion in answer to your inquiry relative to the power of the board to invest surplus funds."

House Surgeon Miles reported the death of Chemist Johnson, who had served the hospital for twenty years, and stated that he had called in Mr. John J. Simeon to act in his stead. He recommended that the vacancy be filled as soon as possible.

Colonel Vincent then read the following report:

Your committee charged with the duty of formulating plans for the establishment of a "Training School for Nurses" in the Charity Hospital beg to report progress and submit herein a provisional plan of organization, subject to further amendments and improvements as the time approaches for the inauguration of the school. This report will allude to many matters of detail which can only take definite form upon consultation with the head nurse to be appointed and the corps of medical instructors. The main purpose of this report is to give the first impetus to the organization of the school and indicate the initial steps to be taken:

First—Requirements for admission into the school and the selection of the nurses.

Applicants will be required to sign a statement giving information in regard to their personal character, their family and social relations and their special fitness for the vocation of a sick nurse.

Second—Home for the nurses and matters relating to their domestic life.

The hospital will at present provide accommodations for twenty nurses, including the head nurse. Special arrangements for their comfort and for their practical instruction can, at small cost, be made in the female department.

The construction of a home for nurses, as provided by all institutions elsewhere, where trained nurses are employed, is a matter for further consideration. Only a home specially constructed or arranged, and apart from the hospital buildings, can suitably accommodate the nurses of the training school. The importance of this matter is urged for consideration.

Third—The organization of the school, the selection of instructors and the adoption of methods of instruction. The corps of instructors should be selected from the resident and visiting staff of the hospital and officially appointed by the board of administrators. The house surgeon of the hospital shall be the dean of the staff of instructors. The selection of the matter and methods of teaching should be left to the wisdom of the instructors.

Fourth—Rules for the government of the school, defining the official relations of all persons engaged in the care of the inmates, and especially defining their duties, will, in due time, be presented for consideration.

Fifth—All matters relating to the graduation of nurses will be reserved for further consideration in counsel with the head nurse and the corps of instructors.

Sixth—Rules governing the service of nurses outside of the hospital will in time be formulated and submitted, and, in connection therewith, provisions made for the maintenance of the school in part by the revenues accruing from this source.

Seventh—Rules governing the discharge of nurses for cause will also, in due time, be presented.

Eighth—The head nurse shall have immediate charge of the nurses of the school, but in all matters of discipline and authority appertaining thereto, shall herself be amenable to the supervisory and executive control of the sister superiors.

Ninth—Shall the training school be composed of female nurses, or male and female?

In answer to this question, occurring in the memoranda which form the basis of this report, we respectfully recommend that the school be inaugurated with a class of female nurses.

While recognizing the great importance of the training of male nurses in a separate school, with the view of fitting them for special service in male wards, we advise at this time the postponement of the matter for further consideration.

Tenth—We recommend that the nurses in training shall be confined in their practical service to the department of women and children, with the view of gradually extending the system with the development of the school.

Eleventh—Matters relating to the immediate cost of establishing the training school: Fourteen of the nurses at present in service in the hospital and under pay will be eligible for entrance in the school. These nurses at present receive in the aggregate \$124 per month, or \$1500 a year. Five nurses and one head nurse at a cost of about \$100 a month can be accommodated at present in the female department, the total amount of salaries amounting to \$1000 a year. The cost of attendance in the female department in arranging dormitories for the nurses will be about \$200. The cost of uniforms will not exceed \$35 during the first year. The summary of the cost of preparations in the dormitory, of uniforms and the wages of the nurses, including the salary of the head nurse, will be about \$—— for the first year.

Twelfth—The annual cost of maintenance in the future will depend upon many conditions—the number of nurses, the extent of the system of employing trained nurses in the hospital, the eventual amount of revenue coming from the services of nurses outside of the hospital, the style of accommodations furnished in their home, and the comfort and conveniences afforded in their domestic life.

These matters are reserved for future consideration.

Thirteenth—We further recommend that the Charity Hospital Training School be inaugurated on ——.

In the meantime, all necessary preparations can and should be made for its thorough organization and its establishment upon a permanent basis.

Looking to the accomplishment of this end, and earnestly urging its importance, your committee desires to report progress.

Respectfully submitted.

W. G. VINCENT.

A. R. BROUSSEAU.

Approved: A. B. MILES.

The report was referred back to the House Committee with full power to act.

The Finance Committee was authorized to pay the December rolls at the end of the month.

Resolutions on the death of Mr. John Johnson, the late chemist of the hospital, were adopted and spread upon the minutes.

Mr. John J. Simeon was elected by acclamation to fill the vacancy of chemist caused by the death of Mr. Johnson.

The question of the election of a second assistant house surgeon created considerable discussion. At the previous meeting it had been decided that the election would take place last night, and a number of applications were on the secretary's desk.

On motion of Mr. Brousseau it was decided to reconsider the previous action.

Colonel Vincent then proposed that the election be postponed until next March, and that the position be open to all candidates by competitive examination, the medical members of the board and the house surgeon to conduct the examination.

Mr. Brousseau amended the motion, proposing that the position be given as a prize to the resident student passing the best examination each year.

The matter was discussed at length and resulted in the defeat of the amendment—Messrs. Brousseau, Seeman and Dr. Shepard voting for it, and Messrs. Vincent, Sentell, McManus and Shakspeare against it.

The original motion was then adopted.

The meeting then adjourned.

Dr. A. G. Shaw, of Iberia, died recently; age, 66 years.

The Attakapas Medical Association met here in Falk's Hall, December 6, 1892, and held their annual session. Dr. Mayer being absent, Dr. T. S. Mudd, of Lafayette, acted as president. Dr. M. B. Tarleton was selected to act as secretary. Twelve members were present, as follows: Drs. F. S. Mudd, M. B. Tarleton, W. W. Lestry, F. R. Tolson, F. W. Courtney, Armand Martin, J. F. Francez, A. Guilbeaux, H. Walet, Ursin Prejean and F. H. Martin. Three new members were elected: Drs. J. B. Trahan, F. G. Mouton and L. B. Arce-neaux.

MARRIED.—At New Orleans, November 14, 1892, by Rev. Sawyer, Miss Edna Dawson, of Jackson, La., to Dr. J. R. Fridge, of Gonzales, La.

MARRIED.—Moss-Summers. At the residence of the bride's brother, W. S. Summers, of Lincoln, Neb., November 29, 1892, Dr. L. H. Moss, of Lake Charles, to Miss Mattie Summers, of Illinois.

MARRIED.—Dr. P. M. Fourquette to Miss Eugénie Anglade, on December 28, 1892, at the St. Louis Cathedral, New Orleans.

The Shreveport Medical Society discussed at its last session the existence of diphtheria in that city.

The inventor of the hypodermic syringe, Dr. Pravaz, died recently in Lyons.

Dr. H. W. Blanc, of Sewanee, Tenn., spent a few days here last month on his way to New Mexico.

Dr. W. B. Bonsall, who was surgeon of the 18th Louisiana Regiment throughout the war, has located at Welsh, La.

Dr. W. H. Ballard, late of Ascension parish, died suddenly in this city last month.

Dr. R. L. Randolph, of Alexandria, recently lost by fire his house and effects.

Dr. H. Dickson Bruns was elected to succeed the late Dr. S. D. Kennedy of the Eye, Ear, Nose and Throat Hospital.

Dr. R. B. Sadler, of Bastrop, recently had the misfortune of breaking his leg, by being thrown from a buggy.

Dr. J. P. O'Leary, of Vicksburg, has gone to Paris, where he intends to take a two or three years course in medicine.

Dr. Wirt Johnston, of Jackson, Miss., secretary of the State Board of Health, has been appointed a member of the advisory council of the World's Public Health Congress to be held in Chicago.

Dr. W. W. Moore, of Summit, and Dr. K. B. McMillan, of Pt. Pleasant, were in the city recently.

Dr. J. H. Magruder, of Algiers, died recently.

A prescription belongs to the patient. In a recent case tried in Detroit the court rendered this decision. Testimony tending to show that druggists regard the prescription as their property was excluded.

The graduate of a Michigan educational establishment, and a practitioner of medicine, was called upon to certify to the insanity of one of his patients. His certificate alleges that his patient "Imagines he ones the welth of the State of Michigan & is vry Troubl Some with his neighbors emagenin them to do hime & his family harm keeping them in terror all the

time with wakefulness all night keeping all the family from rest & all the comforts of home." Surely the physician must have some paragraphic lesion himself, casting doubt on his sanity as a practitioner.

An enterprising novelist has taken time by the forelock and written a story called "Saved by Quarantine."

Dr. M. B. Tarleton and bride spent the holidays at Houma, La.

Dr. W. F. West, of Lannius, Texas, has moved to Dodd City, Texas.

Dr. C. E. Allen, of Centreville, La., died after a short illness; age 55.

Dr. Alfred J. Bernet, of Burtville, East Baton Rouge, was married recently to Miss Mary I. S. Browne of this city.

Dr. W. J. Mobley, of Bellevue, La., has moved to Gibsland.

Doctors of dentistry in Germany are not allowed to use the title doctor.

"Please, mamma, may I go to the drug store with Sam? He has to go and get some compound pathetic pills."

Nearly 1300 cases of typhoid fever were reported recently in St. Louis in one week.

Dr. F. G. Renshaw, of Pensacola, Fla., spent his vacation in Arkansas.

A Hartford, Conn., physician contracted to attend the members of an association during illness for 37½ cents each per year. This caused the local medical society to prohibit the contract system of furnishing medical assistance to any society for less than the usual fees.

Dr. Felix Laurue has returned to New Orleans after two years spent in completing his studies in Europe.

MORTUARY REPORT OF NEW ORLEANS.

FOR NOVEMBER, 1892.

CAUSE.	White.....	Colored..	Male.....	Female...	Adults ...	Children.	Total
Fever, Yellow							
“ Malarial (unclassified)....	11	7	11	7	12	6	18
“ Intermittent							
“ Remittent	2		2		2		2
“ Congestive.....	3		3		3		3
“ Typho	9	2	9	2	9	2	11
“ Typhoid or Enteric.....	5	1	4	2	6		6
“ Puerperal							
Influenza.....							
Scarlatina							
Measles							
Diphtheria	2			2		2	2
Whooping Cough							
Meningitis	4	2	1	5		6	6
Pneumonia.....	11	13	14	10	16	8	24
Bronchitis	11	5	7	9	6	10	16
Consumption	38	33	35	36	69	2	71
Cancer	11	6	3	14	17		17
Congestion of Brain.....	5		2	3	4	1	5
Bright's Disease (Nephritis)	12	7	11	8	19		19
Diarrhœa (Enteritis)	24	5	22	7	15	14	29
Cholera Infantum	5	2	6	1		7	7
Dysentery.....	1	2	2	1	3		3
Debility, General	3	1	1	3	3	1	4
“ Senile	15	16	15	16	31		31
“ Infantile	2			2		2	2
All other causes	167	106	157	116	165	108	273
TOTAL	341	208	305	244	380	169	549

Still-born Children—White, 24; colored, 19; total, 43.

Population of City—White, 184,500; colored, 69,500; total, 254,000.

Death Rate per 1000 per annum for month—White, 22.17; colored, 35.91; total, 25.93

F. W. PARHAM, M. D.,

Chief Sanitary Inspector

METEOROLOGICAL SUMMARY—NOVEMBER.

STATION—NEW ORLEANS.

Date.....	TEMPERATURE.			Precipn. in inches and hundredths..	SUMMARY.
	Mean	Max..	Min..		
1	79	63	71	1.00	Mean barometer, 30.154.
2	80	67	74	.20	Highest barometer, 30.045, 11th.
3	83	67	75	0	Lowest barometer, 29.902, 6th.
4	80	67	74	.16	Mean temperature, 62.2.
5	70	59	64	0	Highest temp., 83, 3d; lowest, 41, 11th.
6	73	58	66	1.21	Greatest daily range of temperature, 22, 19th.
7	80	66	73	.09	Least daily range of temperature, 6, 12th.
8	68	56	62	T.	MEAN TEMPERATURE FOR THIS MONTH IN—
9	59	48	54	.01	1871.....60.0 1877.....58.0 1883.....64.6 1889.....59.0
10	55	42	48	0	1872.....57.0 1878.....61.0 1884.....60.0 1890.....64.0
11	57	41	49	0	1873.....61.0 1879.....65.0 1885.....60.0 1891.....60.0
12	63	57	60	0	1874.....63.0 1880.....56.0 1886.....59.0 1892.....
13	68	49	58	0	1875.....66.0 1881.....61.0 1887.....61.0
14	65	57	61	0	1876.....59.0 1882.....63.0 1888.....59.0
15	65	48	56	0	Total excess in temp'ture during month, 17.
16	75	54	64	0	Total deficiency in temp'ture since Jan. 1, 403.
17	74	60	67	.88	Prevailing direction of wind, N.
18	58	44	51	0	Total movement of wind, 6439 miles.
19	68	46	57	0	*Maximum velocity of wind, direction and date,
20	70	50	60	0	36 miles, from N., 18th
21	75	58	66	0	Total precipitation, 3.55 inches.
22	70	56	63	0	Number of days on which .01 inch or more of
23	66	54	60	0	precipitation fell, 7.
24	59	47	53	0	TOTAL PRECIPITATION (IN INCHES AND HUNDREDTHS)
25	68	48	58	0	FOR THIS MONTH IN—
26	76	55	66	0	1871.....7.14 1877.....6.58 1883.....6.36 1889.....2.18
27	75	59	67	0	1872.....7.43 1878.....7.78 1884.....3.13 1890.....0.42
28	76	62	69	0	1873.....5.95 1879.....3.79 1885.....3.47 1891.....3.31
29	65	54	60	0	1874.....1.12 1880.....6.04 1886.....5.33 1892.....
30	72	53	62	0	1875.....6.79 1881.....7.24 1887.....0.52
					1876.....4.35 1882.....1.98 1888.....1.50
					Total defic'y in precipitation during month, .91.
					Total defic'y in precip'n since Jan. 1, 4.75.
				T.	Number of cloudless days, 16; partly cloudy
				T.	days, 8; cloudy days, 6.
				0	Dates of frost, —.
				0	Mean maximum temperature, 83.
				0	Mean minimum temperature, 70.

NOTE.—Barometer reduced to sea level. The T indicates trace of precipitation.
To be taken from any five-minute record.

G. E. HUNT, *Local Forecast Official.*

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

VOL. XX.

FEBRUARY, 1893.

No. 8.

Original Articles.

[No paper published or to be published in any other medical journal will be accepted for this department. All paper must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a written order for the same accompany the paper.]

THE ELECTRIC LIGHT CURRENT IN MEDICINE AND SURGERY.

By WM. SCHEPPEGRELL, A. M., M. D.,

Assistant Surgeon Eye, Ear, Nose and Throat Hospital, New Orleans, La.

[CONTINUED.]

The plate electrodes should be covered with a layer of

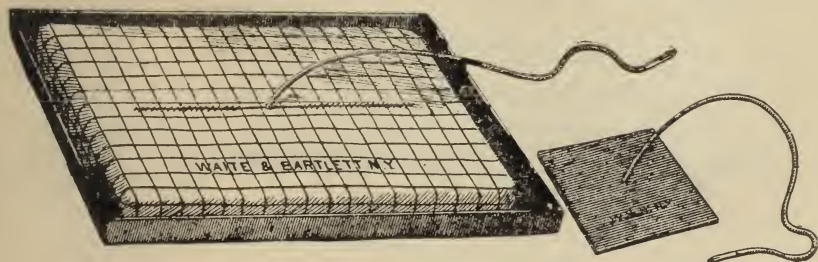


Fig. 15. Apostoli's Abdominal Clay Electrodes.

absorbent cotton, which should be moistened before use.

There are a great number of *active* electrodes employed, being adapted to special organs and uses. For central galvanization and general faradization, etc., the carbon electrode of Dr. McIntosh (Fig. 16) serves a practical purpose. When used, the carbon disk is covered with moist absorbent cotton, which is held in position by a hard rubber disk.

The use of absorbent cotton, in this connection, has entirely supplanted, in the writer's practice, the sponges and

flannel cloths formerly used. The cotton is so easily adjusted that there is little difficulty in covering the electrode with a new



Fig. 16. Dr. McIntosh's Carbon Electrode.

piece for each patient, thus preventing the patient from wondering as to the cutaneous condition of the last patient on whom the electrode was used.

Fig. 17 represents an electrode which may be used for the



Fig. 17. Electrode for Urethra or Uterus.

uterus or urethra. Fig. 18 represents an ear electrode, Fig. 19

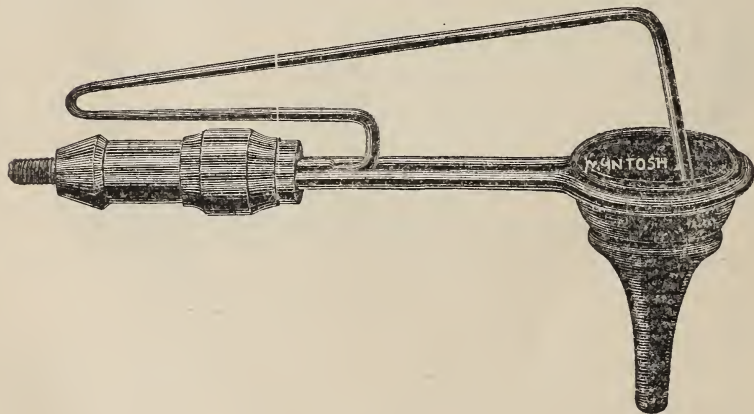


Fig. 18. Ear Electrode.



Fig. 19. Double Ear Electrode.

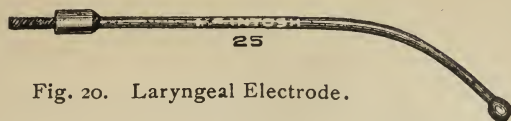


Fig. 20. Laryngeal Electrode.

a double adjustable ear electrode, and Fig. 20 an internal laryngeal electrode.

The writer has devised an electrode, Fig. 21, especially

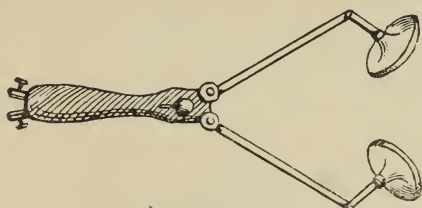


Fig. 21. External Laryngeal Electrode.

adapted for galvanization and cataphoresis in goitre, and for external laryngeal applications, as in paralysis of the abductors or adductors of the vocal cords. It consists of an insulated handle, from which lead two brass rods, which are pivoted from the handle, but which may be fixed in any position by thumb screws. At the end of each rod is a brass disk which is also moved from a pivot.

This arrangement allows the disks to be applied flat to any portion of the neck. There are three pair of disks, respectively $\frac{1}{2}$, $\frac{7}{8}$ and $1\frac{1}{4}$ inches in diameter, any pair of which may be adjusted to the instrument. When used, the disks should be covered with moist absorbent cotton. The handle is provided with an interrupter.

Figure 22 represents the writer's nasal electrode. It con-

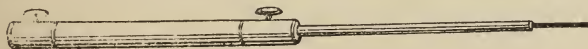


Fig. 22. Nasal Electrode.

sists of $3\frac{1}{2}$ inches of copper wire, roughened at one end, and insulated by a rubber tube for 3 inches of its course. It is attached to an universal handle. For use, the exposed roughened end is covered with moist absorbent cotton. This electrode will be found of service in the treatment of atrophic rhinitis and anosmia, being much less irritating to the parts than the metallic electrodes sometimes used in these cases.

The rheostat, milliampère-meter and a certain number of

electrodes are indispensable in the treatment of all cases. In placing the rheostat and meter in the circuit the following method should be observed: Pass the wire from the positive binding post of the volt selector to the rheostat; the rheostat is then connected with the meter, and the meter with the positive binding post of the table. The negative binding post of the table connects directly with the negative binding post of the volt selector. In galvanic batteries it is unimportant in what part of the circuit the rheostat is placed; but, in the Edison current, the positive is the *charged* wire and a variable amount of current from this wire has a tendency to be *grounded* through the patient. On this account the writer has found it advisable to introduce the resistance (rheostat) on the positive side of the current.

When an electrical application is to be made, the electrodes, having first been moistened, are applied, and the carbons of the rheostat gradually lowered into the water until the meter indicates the number of milliamperes intended to be used. After a varying interval the pointer of the meter will begin to move up the scale, showing that a larger number of milliamperes are passing. This rise of course indicates a decreased resistance. It is caused by an increased blood supply to the parts traversed by the electric current, and also by the moisture from the electrodes penetrating into the skin. This increase of current is sometimes considerable, and may prove painful to the patient. It is remedied by raising the carbons of the rheostat until the meter again indicates the proper number of milliamperes.

When the application is to be discontinued, the carbons of the rheostat should be slowly raised until they are clear of the water, when the pointer of the meter should indicate zero. If properly done the application should be devoid of any shock.

There are cases in which it is advisable to administer the *interrupted galvanic* current. The interruptions may be made either by a switch, by means of which the circuit is alternately opened or closed, or by an instrument (rheotome), which makes these interruptions automatically. Only mild currents should be used in these cases, as the patient feels both the shock of the closing and opening of the circuit.



Fig. 23.
Pole Changer Switch.

The strength of the current should first be graded by the rheostat and measured by the milliampère meter. It is then advisable to switch the meter out of the circuit, the circuit being made to pass around, instead of through, the meter, as the continued vibrations caused by the repeated interruptions of the current are injurious to its mechanism.

An instrument by means of which these interruptions may be made automatically, and by means of which the interruptions may be made at different intervals, is shown in Fig. 24. This instrument contains a spring which is wound up as

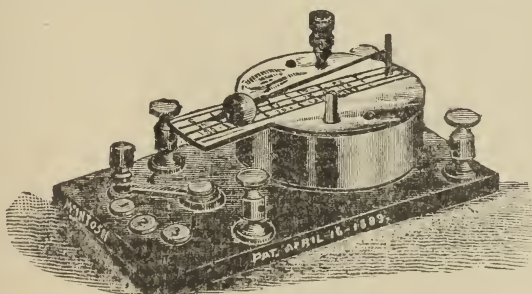


Fig. 24. Graduated Automatic Rheotome.

in a clock, and which operates a pendulum adjustable in length, by means of which the interruptions are effected. The rate of interruptions is further regulated by a switch, so that the range of the instrument is from 6 to 660 interruptions per minute.

A convenient and effective method of making the interruptions is by means of a small motor. An ordinary fan motor or a motor used for operating a static electrical machine will answer the purpose. A commutator, so made that one revolution of the shaft will give 5, 10 or other number of contacts, is attached to the free end of the shaft of the motor. A small brush is placed against the commutator and connects with the positive wire of the galvanic current. Another brush is placed against the shaft, and the wire from this is connected with the positive binding post of the table.

When the motor is set in operation one revolution of the shaft will give as many interruptions as there are contacts in the commutator, and the number of contacts may be varied by increasing or decreasing the speed of the motor.

By having two commutators in the shaft, one with one

and the other with ten or twenty contacts, and a sliding brush so arranged that it may be placed in contact with one or the other commutator, we may have a very wide range of interruptions.

This method of making the interruptions may also be very effectively used in connection with the faradic coil.

The *pole changer* switch (Fig. 23) is used to reverse the current, thus making the negative electrode the positive, and positive the negative. It is sometimes used as a form of interrupted current. When this is the case only mild currents should be used, for reasons given when the simple interrupted current was described.

The *dosage* of electricity depends, not only upon the age, sex and physical condition of the patient, but, as individuals have a different degree of susceptibility to morphine and other drugs, so there are persons who have a special susceptibility to the electric current. Leaving out the consideration of pathological conditions of the muscles and nerves, and lesions of the brain and spinal cord, we find that where a certain adjustment of the rheostat allows say three milliamphères to pass through one patient, it will allow four, five or even six milliamphères to pass through another patient. If the current is passed through the hand the difference may be caused by the different degrees of thickness of the epidermis of the hand, which varies according to the amount of manual labor done by the individual. But, even where this is excluded, we find a marked difference in the amount of *resistance* which different persons offer to the electric current.

When a course of electrical treatment is about to be given, and perhaps for diagnostical purposes, it is frequently advisable to find the resistance of the patient to the electric current. This may be found by the following method:

Arrange the switch of the volt selector so that we have thirty volts available. Then connect the negative and positive binding posts of the table by means of a thick copper wire, and lower the carbons of the rheostat until the meter registers five milliamphères. By a transposition of the equation of Ohm's law we find that the resistance (in ohms) is equal to the electromotive force (in volts) divided by the strength of the current (in ampères). As we know, in this case, the volts (30) and the

ampères (.005), we find that the resistance of the rheostat, in the present position of the carbons, is (30 divided by .005) 6000 ohms.

Now let the patient place each hand, as far as the wrist, in a bowl containing a solution of common salt. Remove the wire connecting the binding posts and connect one binding post with the solution in one bowl, and the other binding post with the second solution. Having closed the circuit note the number of milliampères registered by the meter.

Let us suppose that the pointer of the meter indicates $3\frac{1}{2}$ milliampères. Then by a calculation similar to the above we learn that we now have (30 divided by $.003\frac{1}{2}$) 8000 ohms resistance in the circuit. As, however, we found that the rheostat offered a resistance of 6000 ohms, we learn that the resistance of this patient is (8000 less 6000) 2000 ohms. The calculation may also be made when no volt selector is used, but the full voltage of the current (100 to 120) must then be used in the calculation.

While this method is sufficiently simple, a shorter one may be used in connection with the storage cells to be described in a later chapter. As each storage cell (of those to be described) has an electro-motive force of two volts, three in series will give six volts. Place a milliampère meter in the circuit, and connect the wires from the binding posts with the solutions of salt in the bowls, as before. The patient having placed his hands in the solutions, close the circuit, and note the number of milliampères which pass. Let us suppose this number to be four, then dividing the volts (6) by the ampères (.004) we find the resistance of the patient to be (6000 divided by .004) 1500 ohms.

ELECTROLYSIS.

If the wires from the negative and positive pole respectively, be dipped into water, and the electric current turned on, the water will be decomposed, or *electrolyzed*, oxygen appearing at the positive pole and hydrogen at the negative. If the points dipped into the water are platinum, both the hydrogen and oxygen will be liberated as bubbles of gas. If, however, the points are iron or other inferior metal, the hydrogen will appear as gas, but the nascent oxygen will combine with the iron, forming the oxide of iron.

If a salt be added to the water the solution will also be decomposed, the acid appearing at the positive pole and the alkali at the negative pole.

A similar decomposition takes place when the needles connected with the cords of a galvanic battery are passed into the human body. The tissues around each needle are decomposed, the extent of the decomposition depending upon the nature of the tissues in which the needles are imbedded, the strength of the current and the length of time of its application.

There are two methods of using electrolysis—the *monopolar* and *bipolar*. In the former the needle or needles introduced into the part to be electrolyzed are connected with one pole, the circuit being completed by means of a *dispersing* electrode applied to some other part of the body. In the bipolar method a needle is connected with the negative and positive pole respectively, both needles being passed into the part to be electrolyzed. In the bipolar method, several needles may also be used, both for the negative and positive pole.

In using electrolysis the current, protected by the volt selector and shunt (Fig. 8) should be used as for galvanism, the rheostat and milliamperere meter being in the circuit. The current should be slowly turned on by means of the rheostat, the strength of the current being noted by the milliamperere-meter.

The success of electrolysis in the treatment of tumors will depend upon the nature of the growth. Adenoid tissue is rapidly electrolyzed, fibroids and other more compact tissues more slowly. Enchondromata are but feebly affected by electrolysis, and osteomata not at all, as the calcareous mass can not be decomposed by the electric current.

The best needles for electrolysis are of platinum (Fig. 25), but steel needles may also be used, provided they are employed only in connection with the negative pole. The upper part of the needles should be insulated by a thin coating of shellac varnish, so that the skin or mucous membrane may not be affected by the electrolytic process.

After the operation the points of entrance of the needles should be closed with collodion and iodoform, so that the electrolyzed tissues may not be exposed to septic influences.

The needles may be attached to an insulated handle, or to the needle holders shown in Fig. 26.

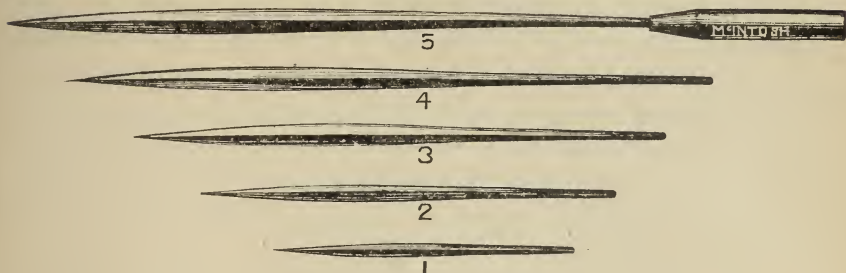


Fig. 25. Platinum Needles.

In using the bipolar method care should be taken that the needles do not come in contact within the tumor. In the monopolar method, the dispersing electrode is placed in the

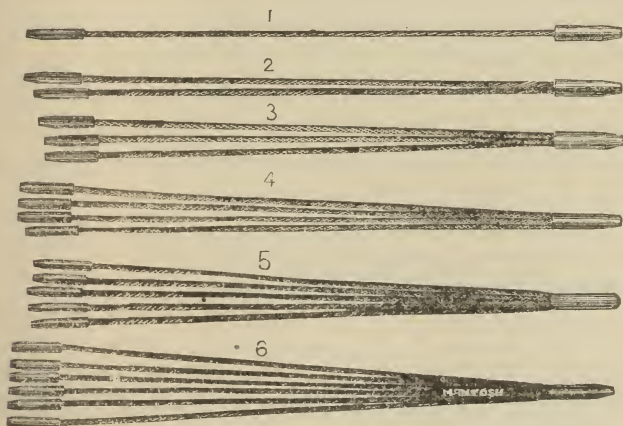


Fig. 26. Needle Holders.

nearest part of the body where there is sufficient surface, as on the abdomen, back chest, etc. The dispersing electrodes are similar to those used in galvanism.

Where a superficial effect is intended, other forms are sometimes substituted for the needle electrode. Fig. 17 shows the uterine electrode used by Apostoli in his galvano-chemical cauterization.

In electrolysis too much tissue should not be destroyed at one sitting, and, as the slough must be absorbed, the sittings should be sufficiently far apart.

Electrolysis has been used with considerable success by

the writer in removing polypus, especially from the nose. The electrolytic needle is passed through the neck of the polypus, and, as the decomposition takes place, the needle is pressed outward, alternately, on one side and the other, until the polypus is detached from its connections. This method is frequently practicable in cases in which it is difficult to introduce the snare. It is distinct from the electro-cautery, as the needle does not become heated, but the tissues are destroyed by electrolysis. It is not necessary to cauterize the site of the polypus when this method is used.

In using electrolysis for removing superfluous hair, the dispersing electrode should be placed on the back, just below the neck, and the needle electrode connected with the *negative* pole. A steel needle may be used, being attached to an insulated handle.

The needle is passed into the papilla of the hair and the rheostat adjusted until from five to ten milliamperes, according to the tolerance of the patient, are registered by the meter. In a few seconds a froth will appear by the side of the needle, when the current is again turned off by the rheostat, and the hair removed by the epilation forceps (Fig. 27).

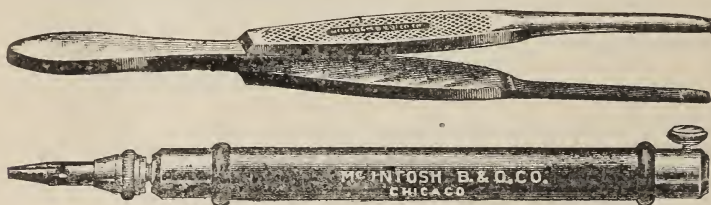


Fig. 27. Epilation Forceps and Needle Holder.

The same method should be observed in removing *navi*, one needle or a considerable number being used. The method of closing the circuit by pressing a button on the needle holder and thus suddenly passing a current of from five to fifteen milliamperes through the patient is very painful and should never be used.



Fig. 28. Dr. Schepppegrell's Needle and Holder for Electrolysis.

Fig. 28 shows holder and needle for using electrolysis* in hypertrophic rhinitis.

CATAPHORESIS.

Cataphoresis refers to the method of introducing medicinal substances into the body by the cataphoric action of electricity. We observed that if we passed a current of electricity through a solution of iodide of potash that decomposition took place, the iodine appearing at the negative pole and the potash at the positive pole. This decomposition takes place not only in the neighborhood of each pole, but in the whole interpolar region, the *katione* passing toward the kathode, or negative pole, and the *anione* passing toward the anode, or positive pole.

That there is, in this process, not merely a separation of elements, but an actual passage of one to the positive and of the other to the negative electrode, was demonstrated by Davy by a number of interesting experiments, of which the following is an example :

He placed a solution of sodium sulphate in two capsules connected by a thread of asbestos, moistened with the same solution, and immersed the positive electrode in one of the capsules and the negative electrode in the other. The salt was decomposed, and, at the expiration of some time, all the sulphuric acid was found in the first capsule and the soda in the second. This experiment demonstrates that the sodium sulphate in both capsules was decomposed, the sulphuric acid passing to the positive and the soda passing to the negative pole, the *molecules in each case traversing the moistened asbestos thread.*

In cataphoresis we make use of this attraction or affinity, which the positive and negative poles have for certain substances, in order to affect the passage of certain medicinal substances through and into the tissues. That some of the substances used in cataphoresis actually remain in the tissues is proved by the fact that after iodine has been used in this manner it may shortly afterward be detected in the urine.

In cataphoresis, only elementary substances as iodine or such compounds whose decomposition by electricity is well

* N. O. Med. and Surg. Journal, September, 1892.

understood, as iodide of potash, sulphate of sodium, etc., should be used. The decomposition of medicinal substances of the vegetable kingdom is so complex that they can not be used in the present state of our knowledge.

In using a substance for cataphoresis, it should be understood whether it is a katione or anione—that is, whether it will be attracted by the negative or positive pole. If, for instance, iodide of potash is used, and the cataphoric action of iodine is required, a solution of iodide of potash should be placed on the *negative* electrode, as the iodine is the *anione* in this compound, and travels toward the positive pole.

Cataphoresis is successfully used in goitre, according to the method of Hunter McGuire. He uses a cup-shaped electrode,* in which he places some absorbent cotton, first dipped in water, and squeezed as dry as possible; and in this cotton ten or fifteen drops of the tincture of iodine is poured. The electrode, thus prepared, is placed over the most prominent part of the goitre, the negative electrode on the back of the neck. A galvanic current of six to eight milliamperes is passed daily for ten minutes over a period of several weeks. The varieties of goitre most likely to be benefited are those which are more or less amenable to the injection of iodine and the employment of electrolysis—namely, the follicular, fibroid, and, possibly, the vascular varieties.

Instead of using the tincture of iodine, the writer employs a solution of iodide of potash, applied to the negative electrode which is laid against one side of the goitre, the positive



Fig. 29. Electrodes for Cataphoresis.

electrodes moistened with water only being applied to the other side. A specially constructed pair of electrodes (Fig. 29) are used for this purpose.

* Hare's Syst. of Therapeutics.

Each electrode consists of a nickel-plated disk of copper, to which is soldered a narrow band of the same material. A binding post, with a short, hard-rubber handle, is attached to the band. When used the disk is covered with absorbent cotton.

The electrodes may be held in position either by holding the insulated handles, or by passing a canvas belt under the bands of the electrodes, and fastening this by a buckle around the neck. The double electrode shown in Fig. 21 may also be conveniently used.

When a current of say five milliamperes is now passed, the iodide of potash is decomposed, the iodine passing into and through the goitre toward the positive electrode. We have here the effects of the *nascent* iodine.

As regards the method of applying the current, the same rules should be observed as suggested for galvanism and electrolysis, the current being protected by the shunt and volt selector (Fig. 8), and the rheostat and milliampere meter being in the circuit.

THE STORAGE BATTERY.

Before entering into the subject of the induced current we will describe the storage battery, which will be needed for this as well as for the electro-cautery, drill-motor and electro-magnet.

A storage battery* consists of a containing jar or cell, a liquid consisting of dilute sulphuric acid called the *electrolyte*, and an assemblage of plates called the *pile*, together with a number of vulcanite forks, called *separators*, for keeping the plates the proper distance apart. The positive plates are generally light brown when new, while the negative plates have a grayish color.

In storage batteries we have not only a supply of electricity which we can use at will, but a supply of electricity so modified that it is adapted to purposes for which the Edison current which charged it† can not be used. This refers especially to the lowered voltage. Should we use the Edison current for

* McIntosh.

† The storage battery may also be charged by means of a gravity or other battery, but, as the object of this article is to show that the Edison current may be used for all purposes for which electricity is employed in medicine and surgery, these methods need not be described here.

operating a faradic coil, unprotected by a shunt, the platinum point of the rheotome, or interrupter, would burn out with a flash. The same current, modified by being stored up in a secondary battery of one to three cells, may be used for the same purpose with impunity.

Although we speak of “storing” electricity and of “storage” batteries, there is really in this no *storing* of electricity. The current of electricity obtained from a storage battery, after being charged, is derived solely from the chemical reactions taking place within the battery. The change which is taking place, either during the operation of charging or discharging, is purely an electro-chemical action.

One of the best storage batteries is the Sorley Accumulator. Fig. 30 shows the appearance of a cell, a plate and the manner of constructing the pile. Each cell has a capacity of 2 volts and 200 ampere ohms.

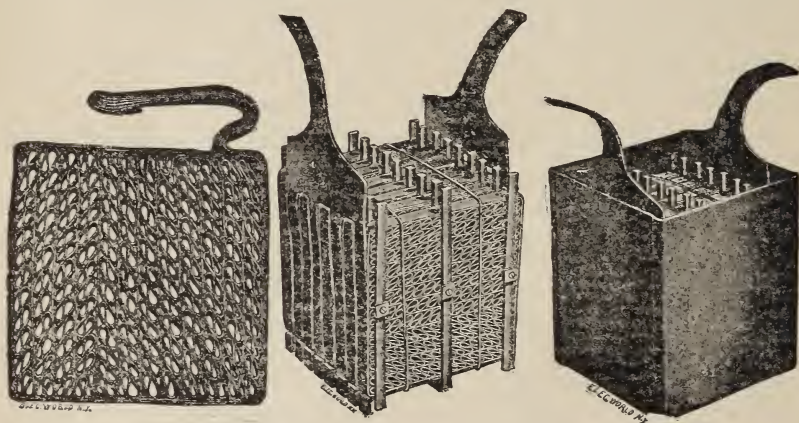


Fig. 30. The Sorley Accumulator.

A storage battery and case is shown in Fig. 31. It is provided with a rheostat for regulating the current.

When a number of storage cells are used the relative capacity in volts and amperes will depend upon the manner in which the cells are connected. If they are connected in *series*—that is, if the positive pole of one cell is connected with the negative pole of the second cell, and so on through the battery, the electro-motive force of the battery will be represented by the product of the electro-motive force of each cell and the number

of cells, thus giving 8 volts in a battery of four cells of 2 volts each.

If, however, the cells are connected in *parallel circuit*—that is, if the positive poles of all the cells are connected together on one side of the circuit, and all the negative poles on

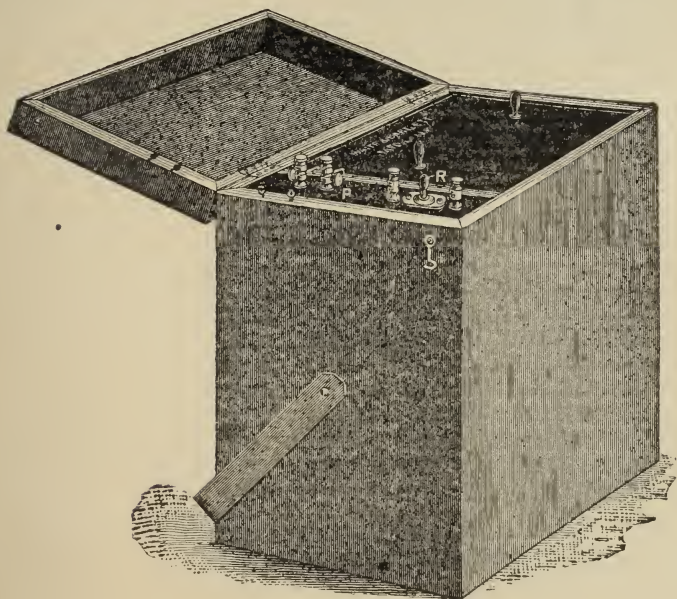


Fig. 31.

the other, then the amperes will be represented by the product of the ampere capacity of each cell and the number of cells. In this case the volts will remain constant, and in the former case the amperes will remain constant.

For the small illuminators and faradic coil one or two cells will be sufficient; for light cauteries and motors, two cells will be sufficient; but for heavy cauteries and motors three or four cells will be needed. In each of these cases the cells should be connected in *series*.



Fig. 32. Galvano-Cautery Cords.

As the electro-motive force of a storage battery is com-

paratively small, the external resistance should be made as little as possible. Therefore, the connections with switch, etc., should be of heavy copper wire, and the connections with cautery handle and drill of heavy insulated cords (Fig. 32).

A wire rheostat should be used to control the current from the storage battery. As the range of resistance of these rheostats, unless made of cumbersome size, is usually small, the writer uses a cell selector (Fig. 33), so that the current from any number of cells may be used. This, in connection with the rheostat, gives a very wide range of current.

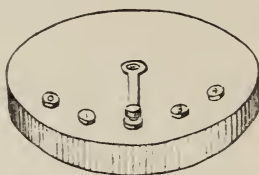


Fig. 33. Cell Selector.

When a storage battery is to be placed in circuit with the Edison current, it should be observed that the positive pole of the battery is connected with the positive wire of the mains, and the negative pole with the negative wire of the main. The battery should be charged until gas is evolved, when it is ready for use.

[CONCLUDED IN NEXT NUMBER.]

NOTES ON DISEASES OF WESTERN MISSISSIPPI.

By DR. WM. G. WILLIAMS, WEST SIDE, CLAIBORNE COUNTY, MISS.

The writer located at Rodney, Miss., forty miles above Natchez, on the Mississippi river, as a practitioner of medicine in June, 1836. At that time Rodney was quite a flourishing town, with a population of about 500. The hill country east and back of the place was thickly settled, but on the opposite side of the river the country in Louisiana was in a state of nature, except here and there along the river front was to be seen a plantation, some of which were large and well improved. About this time the lands lying back from the river began to attract attention, and were rapidly cleared and settled, and few if any now living realize the cost in money and human life of

bringing these lands into cultivation. At this period this part of the country was considered the most unhealthy portion of the United States, and the diseases of the climate at that time were certainly very fatal. May was generally the healthiest month of the year, but from the 1st of June until frost the gastric and hepatic varieties of bilious fever and pernicious remittents and intermittents were the dominant types, gradually increasing in intensity from June until frost, the highest rate of mortality being during the months of September and October. During the winter pneumonia was common, and generally of a bilious complication.

From 1836 to 1850 enlarged livers and spleens were of frequent occurrence, sometimes followed by profound anæmia often ending in anasarca or ascites.

Yellow fever prevailed as an epidemic in 1843, 1847, 1853 and 1867. When I came to Mississippi in 1836, the theory of Dr. John Esten Cooke was generally accepted as the true theory of disease, and his practical opinions very generally adopted. I have known as much as sixty grains of calomel administered at one dose, and in some cases repeated in a few hours, followed if deemed necessary in eight or ten hours by as many Cooke's pills as could be conveniently held in the palm of one hand in bilious remitting fever. Surprising as it may seem, many recovered, and it was remarkable for how many ailments the same remedy was prescribed. These cases of fever were characterized by intense febrile excitement, early delirium, great portal and abdominal engorgement, and the third or fourth paroxysm was often fatal, the surface becoming deeply jaundiced. The writer found that in most cases a few grains of calomel at the onset, followed by the application of a few leeches to the anus, and, if necessary, a saline cathartic, brought speedy relief.

Quinine, of course, constituted a part of the treatment, which was usually administered in doses of five grains between the hours of two and six in the morning. Up to this period (1836) quinine had been administered in very small doses, but from this date its exhibition has been less restricted, and its proper method of administration better understood. As regards the causes of disease, at this time malaria explained every-

thing. Micro-organisms were not thought of as a source of disease. The heat of summer, and malaria if you choose, seemed so to interfere with the function of hæmatosis as to cause fever, and in many cases a loss of balance in the circulation, giving rise to local engorgements difficult to remove. As regards the use of quinine at that early day, it was confined almost exclusively to cases of intermitting fever. Its proper application was only partially understood.

It was not then as now considered valuable in all periodic diseases. Indeed the periodic feature of pathological phenomena was in a great measure overlooked altogether. Periodicity is a law of nature. We observe it in the revolution of the planetary bodies—of the seasons—the succession of day and night. As Bell has said, it is a law of the nervous system. All the functions of the body are performed periodically in health, and this periodic feature is more or less conspicuous in disease. Intermitting fever seems to be the original type of all disease, or in other words, periodicity constitutes a marked feature of the primary stage of all pathological phenomena, and it is a very singular fact that by abolishing this periodicity we often arrest the progress of diseased action. The intensity of the morbid action often obscures this feature of disease, but the tendency to obey this law exists notwithstanding and always demands attention. In eruptive diseases, as small-pox, scarlet fever and measles, this periodic feature should always receive attention, and although all may not require the same anti-periodic remedy or the same mode of administration, yet due attention to this feature of the pathological phenomena will often greatly aid in the treatment, and should never be ignored.

In the eruptive diseases above mentioned, the febrile symptoms may be so intense as to abolish for the time all semblance of periodicity; nevertheless I have been in the habit of administering in the onset early in the morning, say 4 o'clock, five grains of quinine, at one dose, on two consecutive mornings, and I feel assured that this has aided in rendering some cases mild that without its use would have proved far more intractable. It is, I think, a fact that in all fevers, even in those approximating most nearly a continued type, nature makes her most successful efforts to establish a remission or intermis-

sion between the hours of 2 and 7 in the morning, and it is at this time she can be most certainly aided by anti-periodic remedies.

In the fall of 1849 cholera made its appearance, and I observed that about this time our fevers seemed to undergo a change of type. Bilious fever and pernicious remittents and intermittents became less common, and our diseases generally assumed more of an asthenic character.

About 1860, typhoid and typho-malarial fevers made their appearance, and continue with us to this day. It was about 1850 I first observed that form of malarial toxæmia commonly denominated swamp fever, which was at that period confined to the marshy districts of country, and hence called swamp fever, but of late years cases have been of rather frequent occurrence in the high lands near our large bayous and creeks, and occasionally in localities remote. This form of malarial toxæmia often announces its presence unexpectedly.

The patient may have had a few chills, often slight, followed it may be by little fever, impaired appetite and a feeling of malaise, when unexpectedly hæmaturia appears, or the coloring matter of the blood in the urine; and this discloses the fact that the pathological change has taken place in the blood that renders this disease so intractable. From mal-nutrition the capillaries lose their tonicity, become patulous, and hæmorrhage may take place from any part of the mucous surface or skin, on the latter in ecchymosed patches. Irritability of the stomach is a feature of this disease—distressing to the patient, and most embarrassing to the physician. The disintegrated blood corpuscles so encumber the kidneys as to impede their function, and suppression of urine, convulsions, coma and death may follow. In bad cases the change in the blood is so profound that all the tissues of the body may be stained, the skin presenting every shade of yellow, from a light yellow hue to a dark brown.

I would observe *en passant* that this coloration of the tissues and hæmorrhage (black vomit) are present in the yellow fever from a similar cause, namely, a pathological condition of the blood. Indeed, the analogy between this disease and yellow fever is very striking, and this resemblance is the re-

sult of a similar cause. In both we see hæmorrhage from various parts of the mucous surface, ecchymosis and yellow coloration of the skin, hæmaturia, suppression of urine, delirium, convulsions and coma preceding dissolution. The two diseases run their course in about the same length of time.

As regards the treatment of this disease, all I have to say except to enumerate the various remedies that have been relied on from time to time is, that the most certain way to cure it is to prevent its development. By a due regard to premonitory symptoms it can be prevented, and it is unsafe in marshy localities to permit chills or fever to run unattended to. It is in the initial stage that mercury, quinine, iron, strychnine and arsenic exercise their most certainly beneficial influence. It is much easier by a judicious application of these remedies to prevent the disease than to cure it when fully developed. After the hæmorrhagic stage is fully developed, mercury is a remedy of very doubtful utility, and the same may be said of quinine in full doses. When anti-periodic remedies are demanded, arsenic in the form of Fowler's solution has been recommended as superior to quinine in this disease.

The following additional remedies have been used in the treatment of this affection, and I will simply mention them without making any special application of them: Bicarb. soda, hyposulphite soda, bitart. potassium, sulphate magnesia, turpentine, different preparations of iron—particularly the tincture of the muriate, fluid ext. of ergot, ergotin, bicarb. potassium, bromide of potassium, digitalis, digitalin, sulph. morphia, and alcoholic stimulants. The extremely irritable condition of the stomach in some cases forbids alimentation and medication through this organ, and in such cases it is necessary to substitute hypodermic medication and rectal alimentation. The altered condition of the fluids, however, in the advanced stage of the disease renders it necessary to observe caution in the use of the hypodermic syringe. Everything, indeed, depends on a judicious selection and application of remedies to meet the requirements of individual cases, each of which may present peculiarities requiring a corresponding modification in their application, and this constitutes the art of physic.

Proceedings of Societies.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

GYNECOLOGICAL TECHNIQUE AS CARRIED OUT AT THE GYNECEAN HOSPITAL.

By J. M. BALDY, M. D.

It is no uncommon thing to have physicians from all over the country, who are making a temporary stay in Philadelphia, and who are visiting the hospital with the object of seeing operations, question minutely as to the different points in the preparation, and not infrequently express surprise at the simplicity of these. In fact, it has often occurred to me that many of our visitors are more interested in the preparation than in the operation itself. To one who has the success of this class of work at heart, this seems to be a step in the right direction, as it has long since been recognized by the successful operators of the world that more good results are obtained by mediocre operators, whose preparations have been most careful and systematic, than by their more brilliant colleagues, who have been inclined to scoff at minutiae and to depend upon their mechanical skill.

From time to time articles on this subject have appeared in medical print giving the most elaborate description of the preparation and the apparatus used, most of which are undoubtedly excellent and well-fitted for the operating room of a hospital, but which are unnecessarily cumbrous when one comes to apply them to private work. For this reason I have been encouraged to enter upon a detailed description of our work at the Gyncean Hospital, the application of which can readily be carried into private practice. The watchwords from the beginning to the end of an operation are *thoroughness* and *simplicity*.

The aim of all successful operators is the same—namely, the prevention of any septic matter entering into the field of operation. Different operators adopt different methods of accomplishing this object, but for success, the object and result must be the same, whatever the method adopted may be.

Antisepsis or *asepsis*, as fancy may dictate, the principle is the same. To be successful one must be surgically clean. For the proper accomplishment of this one must consider and treat: 1. The patient. 2. The operating room and its paraphernalia, including tables, basins, pitchers, buckets, instruments, ligatures, sponges, dressings. 3. The operator, assistants and nurses.

1. *The Patient.*

The preparation of the patient should begin, when possible, at least twenty-four hours before the operation. The first steps are to regulate the diet and empty the gastro-intestinal tract. Free purgation is begun at once, preferably by the use of some saline. This is usually administered in the dose of a drachm of sulphate of magnesia, dissolved in water, each hour until the bowels begin to move. Usually five or six doses are sufficient to accomplish the object. The purgative should be so administered that the action of the bowels ceases five or six hours before the time set for the operation. After beginning the administration of the purgative, the diet should be light and concentrated. If the operation is to be performed in the afternoon, the patient's supper on the day before consists of the ordinary house diet. From this time on nothing passes her lips, unless it be a glass of milk or a cup of bouillon at breakfast time. Even water, except in small quantities, is withheld. These steps in the preparation can be carried out in the case of most patients, but in dealing with an unusually weak woman, considerable judgment must be used in their application. A hot bath is given, both the day before and the morning of the operation. If the patient is unable to be moved to the bath tub, the baths are given in bed. Prior to the final bath an enema of soapsuds and water and a vaginal douche of bichloride of mercury (1 to 3000) are given. Immediately on coming from the bath a fresh night gown is put upon the patient and she is placed in a bed which has been specially prepared for her reception. After returning to bed the abdomen—the seat of the operation—is especially prepared. A nail brush, soap and hot water are used freely and vigorously, special attention being paid to the umbilicus and pubic hairs. In but exceptional cases is the pubes shaved. The abdomen is then bathed with alcohol and turpentine and is finally protected until the time of the operation with a towel wrung out of bichloride solution.

When the patient is placed on the operating table the abdomen is well rubbed with ether and bathed with alcohol by the operator as the final preparation, especial attention being paid to the pubic hairs and the umbilicus. The legs are wrapped in a blanket, which extends from the feet to the pubes; a second blanket is placed over the chest. All blankets, clothing, table, etc., about the patient from her chest to her feet are now covered with towels prepared for the purpose, the abdomen being left bare from the epigastrium to the pubes. Over all this is placed a piece of bichloride gauze, with a slit in it at the point of the incision.

2. *The Operating Room and its Paraphernalia.*

All tables used in the operating room with the exception of the Krug frame for Trendelenburg's position, which is of galvanized iron, are made of wood, perfectly plain, and shellacked. The reason for this is twofold—first, because it is desirable in the preparation of the room that it should be emptied; this is rendered possible in the case of everything except the gas fixture and the sink. Secondly, as there is an operating room on each floor, it becomes necessary to frequently move the tables from one room to the other. When not in use the windows in these rooms are always open. The walls of the room from floor to ceiling are of white tile, the window trimmings are of white marble, the floors are asphalt, the ceilings are plastered and heavily painted. In the preparation the room is first stripped of all its furniture. The walls, ceiling and floor are washed down with a hose, and then mopped off with a cloth dipped in bichloride solution. As each article is brought into the room it is scrubbed with soap and water, rinsed off, mopped with bichloride solution and placed in its proper position; the tables and benches are covered with sheets or towels specially prepared for this purpose. A glance at the accompanying cut will more clearly demonstrate this.



All linen used in the operating room has been laundered by itself. Distilled water is used throughout the operation.

INSTRUMENTS.—After an operation the instruments are thoroughly scrubbed with soap and water, and are then passed through scalding water before being returned to the case. Prior to the operation they are boiled for twenty minutes in a weak soda solution. As few instruments as possible are used. In an ordinary operation, two needles, two ligature staffs, four

hemostatic forceps, a knife, a needle holder, and a pair of scissors are amply sufficient. These are taken, together with the tray on which they are placed for boiling, directly from the sterilizer, and put upon the table as the patient is brought into the room. In this way they are not handled from the time they are taken out of the sterilizer until they are to be used.

LIGATURES.—Three varieties of ligatures are employed—silk, silkworm-gut and catgut. A half hour before the operation the silk is immersed in a bichloride solution (1 to 100); prior to being used it is washed in boiling water. The silkworm-gut is boiled with the instruments. The catgut is prepared by being immersed in ether for forty-eight hours, soaked for the same length of time in a 1 to 100 alcoholic solution of bichloride of mercury, after which it is put in a solution of two parts oil of juniper and one part alcohol. It is taken directly from the latter solution for use at the operation.

All sutures and ligatures used within the abdominal cavity are of silk (Chinese twist). Silkworm-gut is invariably used for closing the abdominal wound. Catgut is used principally in vaginal hysterectomy and plastic work.

SPONGES.—New sponges are prepared by being thoroughly beaten, soaked for twenty-four hours in a weak solution (3 per cent.) of hydrochloric acid, after which they are soaked for twenty-four hours in a strong soda solution, and are finally placed in alcohol. Immediately after being used in an operation they are thoroughly washed in cold water, placed in a strong soda solution (practically a saturated solution) for twenty-four hours, at the end of which time they are removed, washed under the cold water spigot until all the soda is washed away, and are then immersed in a solution of sulphurous acid for twenty-four hours. They are taken directly from the acid solution, washed and placed in commercial alcohol until used. Four sponges only are used at each operation.

DRESSINGS.—The dressing of the abdominal wound consists in placing several strips of dry bichloride gauze over the incision, a cotton pad covered with gauze placed over this, and the whole held in place by a six-tailed bandage. Dressings are not disturbed for eight days. No iodoform or other powder is used. Stitch-hole abscesses are the rare exception.

DRAINAGE TUBES.—After being used, the glass drainage tubes are soaked in strong soda solution for twenty-four hours, rinsed under the spigot, washed with turpentine and ether, and then boiled for twenty minutes, after which they are kept in commercial alcohol.

Rubber drainage tube, whenever used, is soaked in bichloride solution and washed in boiling water.

After an operation the drainage tube is cleaned by the nurse every fifteen minutes or half hour, as occasion requires. As the fluid discharged from the tube lessens in quantity, the intervals of cleaning are lengthened. Each time the tube is cleaned the nurse's hands are carefully prepared with soap and water and bichloride solution.

At and after each cleaning the syringe used to withdraw the tube contents is cleansed inside and out with hot water and bichloride solution, as are also the mouth of the tube and the rubber protecting it. Fresh bichloride cotton is placed over the entrance of the tube at each cleaning. The tube is removed as soon as the contents become clear and small in quantity. The edges of the opening left by the tube are drawn together by a strip of adhesive plaster, and the dressings replaced by fresh ones.

3. *The Operator, Assistant, and Nurses.*

Everybody who takes part in an operation, and is liable during its performance to handle any of the instruments or materials, is required to go through the preparation. All assistance is rendered by three nurses; the chief nurse assisting the operator directly, a second nurse attending to the sponges, and a third nurse changing the waters. The preparation of operator and nurses is as follows: a hot soap bath and clean linen clothing direct from the wash. The hands and arms are prepared by first carefully cleansing the nails with a penknife, a free use of hot water, soap and nail brush for twenty minutes, and rinsing in fresh water. They are then bathed in commercial alcohol, and are finally soaked in a bichloride solution (1 to 2000) for five minutes. The greatest danger point of infection is, of course, under the nails, and time used in a most careful hand toilet is never misspent—is, in fact, absolutely essential to success.

A careful study of the cut, which represents one of the operating rooms as it appears prior to the introduction of the patient, will demonstrate the simplicity and thoroughness of all the preparations. There is not an article in the room which can not be duplicated or easily substituted in almost any well-ordered household. Soap, water, nail brush, and bichloride of mercury tablets are easily obtained, and as for the remainder it rests entirely with the surgeon and his nurse. With a little more time and trouble the poorest hovel can be turned into a good and safe operating room, by adopting these rules, as I have been able to demonstrate time after time in my work in the slums of this great city. Of course, it means plenty of hard labor, for both nurse and surgeon, but what nurse or sur-

geon who has once passed through the horrors of attendance at a death from septic peritonitis would not feel that the work before the operation was as nothing in comparison to that afterward.

The number of instruments, sponges, etc., may seem to many to be entirely inadequate for the purpose, but in many hundreds of operations we have found them amply sufficient; it is the rare exception that recourse to the instrument case is necessary. The fewer articles used the fewer sources of possible infection and accident. A large number of instruments lying about are, in addition, a source of endless confusion and annoyance, and they require an extra assistant.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON ORTHOPÆDIC SURGERY.

Stated meeting December 16, 1892, Henry Ling Taylor, M. D., chairman.

A CASE OF CONGENITAL CLUB-FOOT SHOWING VERY LITTLE EQUINUS.

Dr. Royal Whitman exhibited for Dr. Townsend a case of congenital club-foot, which was interesting because there was so much more varus than equinus present. Apparently, the club-foot was originally not very severe, but having been entirely untreated, there had been a moderate increase in the deformity, with atrophy of the foot. The deformity would probably yield easily under forcible correction with division of the tendons.

Dr. Halsted Myers said the case was a good illustration of the fact that when one corrects the varus the equinus becomes more prominent; in other words, that when the foot is in the position which it occupies in this boy, with the toes flexed and the foot adducted, the equinus does not appear so great as it really is.

Dr. A. B. Judson commented upon the remarkable development of the calf muscles in view of the fact that he had gone so long a time untreated. He thought if the foot could be held around mechanically, so that the callosities on the outer border would disappear, the boy would probably walk with greater facility.

The chairman said that the doubling under of the outer toes and the falling together of the anterior part of the foot were rather unusual features. In his opinion, mechanical treat-

ment would be sufficient to reduce the deformity without a resort to cutting operations.

POTT'S DISEASE SIMULATING LATERAL CURVATURE.

Dr. R. H. Sayre exhibited a young girl whom he had seen yesterday for the first time. The case at first sight looked like one of ordinary lateral curvature, and indeed not long ago, according to the mother's statement, this was the diagnosis made at one of the orthopædic institutions in this city; but closer investigation showed a kyphos at the sixth dorsal vertebra. Six months ago she fell out of a hammock and struck on the left side. Three months later she began to have pain under the sixth rib in the left mammary line whenever the heels struck the ground forcibly, or when she was jolted in the cars, or when coughing or hiccoughing. The mother thinks this "knuckle" in the back was not so prominent at the time the diagnosis of lateral curvature was made. In most cases of Pott's disease the diagnosis is reasonably clear, but occasionally one meets with a case like this one, in which two or three very critical examinations are necessary before a positive diagnosis can be made.

Dr. V. P. Gibney presented a boy, 14 years of age, as an illustration of the effect of over-correction in congenital club-foot. He first came to the hospital ruptured and crippled when quite a baby, and was treated according to the plan then in vogue, with a side splint bandaged to the outer side of the foot and leg, with the object of favoring extension of the foot. About one year later the tendo Achillis was divided in order to overcome the varus. He was not seen again until four or five years ago, when he showed a slight relapse, there being some shortening of the tendo Achillis and plantar fascia, and a disposition to walk on the outer side of the foot. Under an anæsthetic, the foot was twisted into an over-corrected position, and plaster of paris applied, and allowed to remain on for some months, when it was necessary to repeat the operation. The heel-cord and the plantar fascia were operated upon at the same time. He was not seen after this operation until a week or two ago, when he returned, complaining of a feeling of fatigue on walking, and of slight pain in the metatarsus. Examination showed the tendo Achillis to be lengthened, and a moderate degree of flat-foot to be present. This case, and the one recently presented by Dr. Whitman, showed the fallacy of the prevailing opinion that it is hardly possible to over-correct a case of club-foot.

Dr. R. H. Sayre did not think that the patient had a flat-foot, but a decided valgus, with marked shortening of the

peroneal tendons. It looked to him as if the arch had not been sufficiently lengthened, and that too long a splice had been made in the tendo Achillis, so that there was not sufficient contractile power left in the hamstring muscle to properly elevate the heel.

Dr. A. M. Phelps said that the tendo Achillis was undoubtedly too long, but as he could not detect any motion in the gastrocnemius and soleus muscles, he was inclined to think that it was a case of non-union of tendons.

The chairman thought the case illustrated the danger of doing the operation on the heel-cord and on the plantar fascia at the same time. If the heel-cord be preserved until after division of the plantar fascia, the operator has a fixed point from which to work upon the latter.

Dr. Gibney said that when the case relapsed, an attempt was made to produce over-correction, but it was found necessary to divide the cicatrices about the tendo Achillis. He did not think Dr. Phelps could demonstrate that this was a case of congenital paralytic equino-varus; the position of the heel and the lengthening of the heel-cord were sufficient to explain the position of the foot without supposing the existence of any paralysis.

Dr. E. D. Fisher, present by invitation, remarked that the general appearance of the case did not favor the theory that there was any sensory paralysis.

INFANTILE PARALYSIS—ANASTOMOSIS OF TENDON.

Dr. Parrish, present by invitation, exhibited a patient on whom he had performed this novel operation. It had occurred to him that a more useful limb might result from artificially uniting the tendon of the paralyzed muscle to that of some live neighbor, in cases of infantile paralysis, and it was only a few days ago that he had learned that this was not the first case upon which the operation had been done. The operation was first performed by him on May 15, 1892, an incision being made in the space between the tendons of the extensor pollicis and the anterior tibial muscle, and these tendons then united by catgut. The foot was then placed in a position of inversion, with slight extension, and a plaster of paris dressing applied. Before the operation there was a dropping of the arch of the foot; after the operation the child had another acute attack of infantile paralysis which affected the posterior tibial muscle. A second operation was therefore done on November 20, last, and the plaster dressing which was then applied was not removed until two days ago. In this second operation, the sheaths of the gastrocnemius and the tibialis posticus were cut

open, the tendon scraped for a distance of about one inch, and then the two united by a catgut suture, without drainage. The child is already able to walk much better than before those operations, but it is possible that another operation upon the anterior tibial will be required. The treatment now will consist in breaking up all adhesions and exercising the muscles.

Dr. R. H. Sayre said that last spring, while looking at some of these cases of flat-foot, Dr. Parrish suggested the propriety of attaching some live muscle to the dead tendon of the tibialis posticus. The idea struck him at the time as a most excellent one, and he was glad that this first case had been distinctly benefited by this treatment. It was unfortunate that after the first operation the child should have had another attack of infantile paralysis, and this seemed to him to be largely responsible for the imperfect result of the first operation. After the first operation the arch of the foot was well supported, but there was a marked eversion, and it was for this that the second operation was done. Two weeks ago he had himself performed the anterior operation on a girl about fourteen years of age, and he hoped to report upon her case at some future meeting. He then referred to two cases in which a similar operation had been done upon the tendons of the fingers.

Dr. A. M. Phelps then presented

A CASE OF EXTREME TALIPES CALCANEUS WITH TOTAL LOSS OF
POWER OF THE GASTROCNEMIUS AND SOLEUS MUSCLES,

Upon which he had operated in a similar manner. The operation was done on the 22d of last September, and so far as he knew at that time it had not been done before. The operation consists in shortening the heel-cord about one inch, and in uniting the tendons of the paralyzed muscle to the tendons of muscles which had not been paralyzed—the long flexors of the toes. The foot was dressed at a right angle, and although there had been quite a noticeable gain in power, there had been not so marked a change in the calcaneo-valgus. It would have been better if he had placed the foot at the time of operation in a super-corrected position. He hoped now by the use of Judson's brace, and by improving the conditions of the muscles by electricity and massage, to be able to overcome the calcaneus.

Dr. Judson remarked that the function of this brace was to take the weight of the body from the toe and place it in the neighborhood of the tubercle of the tibia, and hence the front part of the band at the upper end of the brace should be well padded so as to make this pressure bearable.

TENOTOMY AND TENDON-GRAFTING.

Dr. A. M. Phelps read a paper on this subject.

DISCUSSION.

Dr. R. H. Sayre said that his own experience had led him to think that where there was reflex spasm produced by "point pressure," either forcible rupture or section would be required. He did not refer to the spasm existing around diseased joints, but to cases in which there were contracted tendons wholly independent of any joint inflammation.

Regarding the boy who had been presented, he would say that his father had differed with him as to the best method of treating this boy; his father believing that tenotomy was indicated, while the speaker thought that stretching under ether would be sufficient. The parents of the boy had not agreed to the treatment proposed, and the case had accordingly passed from under their observation. He thought the boy at present showed the same condition as the other patient presented, with abnormally elongated tendo Achillis, as shown by his inability to stand on his toes. He fully agreed with the author as to the correctness of the general principle of immediate correction after tenotomy, and also thought that in the interesting case in which Dr. Phelps had sutured the flexor muscles of the toes to the tendo Achillis a better result would have been obtained if the foot had been immediately placed in a position of equinus. The author seemed to imply that it would be impossible to make too long a splice in a tendon. This is not so, for there is a point beyond which the muscle can not contract. His criticisms on the "traction treatment" and its effect on the nutrition of muscle were based upon purely theoretical grounds.

Dr. W. R. Townsend said that as the author had spoken of "contracture" and "contraction," he would like to ask if any of the members could distinguish between these two conditions, for he could not, and he knew several of those present who had expressed their inability to do so. He did not think the distinction made between the two conditions of any value as a guide to tenotomy.

Dr. H. W. Berg said that these terms had a well defined meaning, but Dr. Phelps had used them in just the opposite sense. The term "contracture" is applied to a temporary shortening of the muscle, while the term "contraction" is applied to a permanent shortening of the muscle. From this definition, it follows that the muscles which should be cut are those which are *contracted*, while the *contractured* muscles demand stretching.

Dr. N. M. Shaffer remarked that the preceding speaker

had given the definition of these terms as usually found in dictionaries.

Dr. Brackett, of Boston, being invited to take part in the discussion, said that he had been particularly interested in the subject of tenotomy in its relation to the treatment of club-foot in infants. In the treatment of such cases, the surgeon should be guided by the individual case, not by any generally accepted rule. The earlier the deformity is corrected the more will our efforts be aided by the process of natural growth in restoring it to a normal state. At present his plan of treatment consists in first correcting the varus by means of a brace, or by plaster bandages, renewed at short intervals; then performing tenotomy, [first cutting the plantar fascia, secondly the scaphoid ligament, and thirdly dividing the tendo Achillis. The foot is then kept in plaster of paris from four to six weeks. As a rule, it will be found that the foot has not only been corrected but will maintain its position if the precaution is taken to keep on some simple retention shoe until the child is nearly ready to walk.

Dr. S. Ketch said he would like to know on what ground the author had made the statement that mechanical treatment should be abandoned if satisfactory progress were not observed in the course of "a few weeks."

Dr. A. B. Judson thought that in the fact that our specialty was orthopædic surgery, and that our patients were growing children, was to be found sufficient justification for the continuance of mechanical treatment, not merely for "a few weeks," but for *years*. If a deformed foot is brought nearly to its normal shape, the growth of the child tends to restore the part to its normal condition; whereas, if allowed to remain deformed, it will grow more and more deformed.

Dr. Shaffer could not accept the views expressed by the author regarding the deleterious effect of traction on the nutrition of muscles; for his personal experience had taught him that traction when scientifically applied, not only did not cause atrophy, but, on the contrary, resulted in an increase in the volume of the muscle. Moreover, after it has been applied, and especially in cases of infantile paralysis club-foot, it is not at all unusual to observe a pronounced increase in the temperature of the entire member as well as an increase in motor power even at remote points, an increase which is so noticeable as to be appreciated by the patient and made a subject of comment. Judging from the traction-shoe which the author had exhibited, it was evident that he did not know much about the proper method of employing traction.

Dr. R. H. Sayre said that a not infrequent cause of fail-

ure of tendons to unite was the faulty application of dressings, by which undue pressure is made over the seat of operation and the gap between the tendons occluded.

Dr. Phelps, in closing the discussion, said that in his use of the terms "contracted" and "contractured," he had simply quoted Barwell and Sayre. He had advised the discontinuance of purely mechanical treatment after a few weeks, because if at the end of this time he found little or no progress had been made, and the parts were rigid, he knew that by doing a tenotomy he would do the patient no harm, and would not only save much time, but would be able to remove the braces very much sooner. He did not think it was a good plan to needlessly load down growing children with steel braces for years at a time, as seen in one of the cases presented. He did not advocate the performance of *repeated* tenotomies, but the performance of one thorough one to perfectly overcome the deformity, dressing in the super-corrected position. Traction increases the warmth of the limb only in the same way that massage increases the circulation and temperature of the parts. Where he did employ traction he preferred to use his hand to any form of traction apparatus which had been devised. He confessed his inability to distinguish between a contraction and a contracture.

POLIOMYELITIS ANTERIOR ACUTA INFANTILIS; ITS ETIOLOGY
AND TREATMENT—A CLINICAL STUDY OF
SEVENTY-FIVE CASES.

This was the subject of a paper read by Dr. Anna M. Galbraith. The new points raised in the etiology of this disease were the result of three years of careful observation and study of these cases. The necessity for the energetic treatment of the acute stage was emphasized. The histories of five cases seen one month after the attack illustrated that regular treatment begun at this time might often lead to a practical, if not to a complete, cure of the disease; whereas left to itself, the natural tendency was to go on to atrophy, deformity, etc.

DISCUSSION.

Dr. N. M. Shaffer said that he was familiar with the cases which formed the basis of this paper, and he could vouch for the care with which the observations had been made. Regarding the question of whether or not traumatism could be considered an etiological factor, he would say that his own studies would lead him to oppose this view; and although in the cases cited by the author the relation of cause and effect seemed

clear, he would decline to adopt this view until additional evidence had been accumulated. He took very much the same position in regard to the tubercular diathesis as a predisposing cause of infantile paralysis. Her observations had led him to think that a very slight attack of acute poliomyelitis anterior could occur with complete recovery, and that such cases did occur without any subsequent paralysis.

Dr. Brackett referred to a case in which there was very noticeable hyperæsthesia, followed by the usual symptoms of infantile paralysis. Subsequent inquiry had elicited the fact that frequently with the fever there is marked sensitiveness, particularly at the back. He had been unable to find any mention of this hyperæsthesia in the literature of the subject.

Dr. Fisher thought the history of tuberculosis in these cases was simply a coincidence, and the history of traumatism was hardly of much consequence, as such a history could be obtained in almost all children. In those cases in which the muscles respond to the faradic current within two or three weeks after the initial attack, he felt sure that if they had proper care recovery would take place, but after a period of three or four months the cells are known to be so seriously affected that there is but little likelihood that the damage will be repaired, although by careful and persistent treatment certain muscles will be strengthened. It has been suggested that mechanical irritation, or an electric current through a nerve, may pass up the cord and irritate the nerve centre in the cord, and perhaps in this way affect the nutrition of the cell. This is a pretty theory, but when the muscles have absolutely failed to respond to the faradic current, and atrophy is present, together with the reaction of degeneration in the muscle, the muscle is irrevocably lost. Continued massage and electricity will improve the condition of the neighboring muscles, but not of the particular muscle which has already failed to respond to the current. He did not see many children in the early stage of infantile paralysis, but in those which had come under his observation he had not noticed any great degree of hyperæsthesia.

Dr. Shaffer said that last spring he saw three cases in which there was at first fever, then a period of marked hyperæsthesia, and thirdly, a "limp" condition, which was the stage of true paralysis. He thought the hyperæsthesia was always present, especially in severe cases, to a greater or less degree. In the three cases referred to, the paralysis was more extensive and profound in those cases where the hyperæsthesia was the most pronounced.

Dr. Ketch said that he had noticed in both dispensary and private practice that children having infantile paralysis pre-

sented a particularly healthy looking appearance, and he had seen nothing to lead him to suppose that these patients were tuberculous. It is reasonable to expect that many of the cases coming to the dispensary would give a history of tuberculosis, so that many more observations were necessary before this point could be considered as settled. He had had an opportunity of seeing most of the cases described in the paper, and he could testify to the marked improvement which had occurred as a result of the treatment adopted. The prevailing idea that these cases are nearly hopeless is not founded on careful clinical observation.

Dr. H. W. Berg said that an important objection to Strumpel's theory that infantile paralysis is an infectious disease is the fact that adults are never affected with poliomyelitis anterior; and the fact that two or three cases have occurred in the same family, or that in a certain town, out of a population of fifteen hundred, quite a number of cases have occurred, does not prove anything. He did not think the method of treatment employed during the first month made any difference in the ultimate result; for the cells, if severely inflamed, would be permanently damaged in spite of any treatment which might be employed.

Dr. Galbraith, in closing the discussion, said she had known hyperæsthesia to occur as early as the fourth day, and to last as long as two months. Its intensity and duration would appear to be in proportion to the extent of the paralysis, and it disappeared in the same order as the retrogression of the paralysis.

The traumatism must be sufficient to cause concussion of the spine in a spinal cord predisposed thereto. In two of the cases, fever had occurred in a few hours, followed by paralysis on the third day.

The prognosis in the acute stage should be more guarded, since death may occur with the onset of the paralysis. And further, since many children die during the second year, at which age this disease is most frequent, and under the same circumstances, in which no autopsy is made, it must be believed that this malady is more fatal than is generally supposed.

The belief in a tubercular diathesis was based, first, on the frequency with which pulmonary tuberculosis was found in the family history of these patients—30 per cent. Of these, 25 per cent. had phthisis in both the paternal and maternal families, 37 per cent. showed two or more members of the same family to have suffered from phthisis; 33 per cent. had phthisis with some well marked neuroses; second, the profound impression made by the disease on the general health—50 per cent. sub-

sequent to the attack showed, in addition to the profound anæmia, marked emaciation with a tendency of the mucous membranes to become inflamed, enlarged glands, sore eyes, urticaria and obstinate eczema; third, the slight power of resistance of these patients to any intercurrent diseases, as pertussis, measles, etc.

The prognosis as to ultimate recovery or improvement in the chronic stage will depend on the extent and severity of the paralysis, the length of time which has elapsed since the onset and the regularity with which the treatment is carried out. At the onset of the paralysis only *some* of the ganglionic cells are destroyed, others are simply disabled or threatened through congestion of the cell, great pressure, and infiltration of the tissue, as well as by lack of nourishment due to the blood stasis. Hence the necessity for treatment directed to the condition of the cord, as well as the direct treatment of the muscle, stimulation of which tends to prevent its degeneration, and, through the muscular contractions, acts on the ganglionic cells.

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AUGUSTUS McSHANE, M. D

COLLABORATORS:

DR. F. W. PARHAM.

DR. H. W. BLANC.

DR. A. W. De ROALDS,

DR. R. MATAS.

DR. JOHN DELL'ORTO.

Editorial Articles.

DR. SAMUEL LOGAN.

It is but a short time since the JOURNAL chronicled the death of one of Louisiana's most prominent physicians and upright men. The death of Dr. R. H. Day, of Baton Rouge, La., stirred in the breast of every one who had the good fortune to know him a feeling of genuine sorrow; and now the community is again moved to grief at the passing away of a man who had for many years occupied a place in the esteem of all never attained but by those who combine the spotless character of a vigorous manhood with a profound knowledge of, and deep devotion to, his chosen profession.

The deep bereavement suffered by Dr. Logan less than a week prior to his demise in the death of his helpmate aroused the sympathies of all of his friends. Her death, after a brief illness, was a blow from which he never recovered. On Thursday, January 12, 1893, after discharging the duties of the day, Dr. Logan was preparing to leave his office, and while he was putting on his overcoat, he sank, almost powerless, into his chair. He had been stricken with apoplexy.



DR. SAMUEL LOGAN.

DIED IN NEW ORLEANS, LA., JANUARY 14, 1893.

He was speechless from the beginning, but not unconscious. He must have felt that something serious had happened, for he pointed to the next room, in which Dr. E. S. Lewis had his office, and the office assistant at once summoned him. When Dr. Lewis entered Dr. Logan's office a moment later, he found the sufferer speechless, but not unconscious, for his gaze was intelligent, and he motioned to his head as the seat of his suffering. Drs. J. B. Elliott and George K. Pratt also promptly answered the summons, but from the start Dr. Logan was a doomed man. He was placed upon his operating table, and there he died in two hours after the cerebral hæmorrhage began. When he first sank into his chair, the whole of his right side collapsed, and he would have fallen if he had not been supported. The hæmorrhage was progressive. When the writer saw him, about ten minutes after the onset of the attack, the patient was unconscious, breathing stertorously, pupils unequal, and the pulse less than fifty per minute. He vomited several times. As time wore on his breathing became more and more labored and his pulse became feebler and more rapid, attaining a rate of 136 per minute. It was evident to all that Death claimed him as his own. He passed away at 5:45 P. M.

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* *

It is not a feeble pen that can adequately portray the character and life work of a man of Dr. Logan's calibre. It is a task beyond our powers. A biography of Samuel Logan can not be written hastily; it is a work that demands of him who undertakes it an intimate knowledge of the many hardships and struggles that he manfully endured during one of the darkest eras of our national existence; and, further, an ability to see into the inner life of a conscientious physician.

The writer recalls Dr. Logan as one of those to whom he is indebted for his medical education in its beginning; later, as his superior officer (as visiting surgeon) while a Resident Student of the Charity Hospital; and, ever afterward, a wise counsellor, an open, ingenuous man, and a model of uniform courtesy to all who approached him. In deploring the loss of such a man, we but voice the sentiments of all whose relations with him enabled them to know and appreciate him.

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* *

In the absence of an elaborate and complete biography of Dr. Logan, we present to our readers a brief outline of his life and ancestry, and await a juster tribute from those whose life-long acquaintance with the illustrious dead qualify them for the task.

Dr. Logan was one of the leading physicians of the city, and one of the most eminent and widely known physicians of the Southwest. He was born near Charleston, S. C., April 16, 1831, and is descended on his father's side from the Scottish gentry. As far back as the thirteenth century the Barons Logan of Restalrig owned large estates in the neighborhood of Edinburgh, including a portion of that city. Sir Robert Logan, of Restalrig, Lord Admiral of Scotland, in A. D. 1400, defeated an English fleet in the Frith of Forth, and on the return of James I from his captivity in England he knighted him a Laird of Restalrig and made him high sheriff of Edinburgh. The family estates excited the cupidity of James II. Charges were trumped up against them by hirelings, who pretended to identify Laird Logan of Restalrig with the alleged conspiracy of the Noblemen Gowrie and Ruthven, who had been put to death. The family left the country and resided in a place called Luigan, in Ireland, but their descendants afterward moved elsewhere. James Logan came out to Philadelphia with William Penn, of whom he was an intimate friend, and the Logan Square and Loganian Library of that city derive their names from that branch of this family, of which there are still numerous descendants in the State of Pennsylvania.

The first American settler of the South Carolina family of Logans was Col. Geo. Logan, of the British army, who settled in South Carolina in 1690, at the first site of Charleston. Col. Logan took a prominent part in the growing city, and was in command of a troop of horse when Charleston was attacked by Spaniards and French in 1706. In 1716 he was Speaker of the provincial House, and his son George married one of the three daughters of the Governor, Robert Daniel, born July 30, 1719, and the existing family of Charleston Logans are the direct descendants of that union. They have always occupied a very high social position in that State, and their descendants have settled throughout the South. George Logan, the great-grand-

father of Dr. Samuel Logan, was a surgeon of the Revolutionary war, and his son George was also a physician, practising for fifty years in Charleston with distinction. He occupied several positions of honor in the profession, and was the author of a work on "The Diseases of Children." His son, George William Logan, father of Dr. Samuel Logan, was a lawyer and judge of eminence, and died at an old age, universally lamented.

Dr. Samuel Logan's mother was a daughter of Dr. Joseph Glover, a distinguished citizen of Charleston and a member of a famous old South Carolina family.

Dr. Logan received his preparatory education in Charleston, S. C., and then entered the university of the State, but did not graduate. His father, with a burden of thirteen children, experienced such losses financially that young Logan, at nineteen years of age, left the university in his graduating year, though he was one of the foremost men in his class.

He taught school during the next summer, and the subsequent session he attended school at the University of Louisiana, now the Tulane University. He graduated in medicine in 1853 at the South Carolina Medical College.

He commenced the practice of medicine near Charleston, and in three years removed to that city, but he had been there but a few months when he received the appointment of assistant demonstrator of anatomy in his *alma mater*. Dr. F. P. Miles, the demonstrator, was elected to the chair of anatomy a year afterward, and Dr. Logan was then appointed in his place. He was also lecturer of surgery in the summer school till the outbreak of the war. He volunteered his services, entered the war as surgeon at its inception, and was assigned to duty at a hospital at Richmond. He filled this duty with so much ability that he received orders to report to General Lee as "operating surgeon in the field with his command." Toward the close of that hard campaign, Surgeon Logan was prostrated by an attack of typhoid fever which proved almost fatal, and threw him out of active service for three months. When he again reported for duty he was assigned to the coast of South Carolina, Georgia and Florida as medical inspector under General Lee. He reported on the hygienic condition of each camp

and organized hospitals. He was kept on active duty here till the active campaign around Petersburg, in charge of which he remained till the threatened attack on Wilmington, N. C., caused a concentration of troops there.

Then Surgeon Logan received orders to report as medical instructor to Major General Whitney, then in command of that department. Again he was employed in organizing and inspecting hospitals for some months. He remained in this service with Major General Henry Whiting, and afterward of General Bragg, till the abandonment of Wilmington and the absorption of the forces by those of General Joseph E. Johnston. He then reported to General Johnston for duty as medical inspector of the troops in North Carolina. Sherman had destroyed communication with the south. The hospitals of the north had been filled with men from Lee's army; a large force had been concentrated under General Johnston in North Carolina, whose hospitals were full and hospital material exhausted. School houses, churches, hotels, etc., were inspected all over the State and seized for the purpose of hospitals, and these were being put in readiness to meet the emergencies of the campaign, when the Confederate cause was lost, and an end was put to all further labor in this re-

Dr. Logan, though gentle and kind, possessed an under current of decision and firmness that was an important factor in his success. An instance of this is told of him during his career as army surgeon. Upon one occasion he detailed a young physician in his charge to go and nurse soldiers suffering with small-pox. The young doctor was afraid of the disease and refused to go. Dr. Logan reported him, and had him cashiered. He then went to the small-pox hospital to which he had ordered the physician and himself nursed the suffering soldiers.

When Surgeon Logan surrendered with Gen. Johnston's staff at Greensboro, he went to Columbia, S. C., where his father and six sisters had refugeed. The residence occupied by them had been destroyed, with its contents, in the fearful conflagration which celebrated Sherman's arrival in that city. Everything in the house was destroyed, and the family for

three days found refuge in the corridor of an insane asylum before they could be provided for. They at length found a place with a friend, and here Dr. Logan met them again. Realizing that in the face of the misfortunes that had befallen him he must still keep a good heart and do something, Dr. Logan secured the army horses of his brother, Gen. T. M. Logan, then detained in Virginia, and his own, and started a stage line, consisting of an open spring wagon filled with wooden chairs and drawn by two horses, which he and his father drove back and forth across the stretch where there was no railroad. This sufficed to earn a livelihood for the family until winter, when they all removed back to Charleston.

In 1865 and 1866, at the session of the South Carolina Medical College, he performed his former duties in the chair of anatomy and surgery, and in the following summer was elected to the chair of anatomy in the Medical College of Virginia, in Richmond. In the fall he removed to Richmond and delivered one course of lectures on anatomy, after which he accepted the chair of surgery, tendered by the New Orleans School of Medicine in the summer of 1867. He came to New Orleans early in August of that year, and in 1869 he was elected dean of the New Orleans School of Medicine. He was elected professor of anatomy and clinical surgery in 1872, in the medical department of the University of Louisiana, and soon commanded an extensive practice as a surgeon. He was peculiarly fitted, too, as a teacher, his bedside instructions and clinical lectures and operations ranking him high among the teachers of practical surgery. Dr. Logan was not unknown to the literary world. He first came before the public as one of the editors of "*Geddings Surgery*." This book was got up from the notes delivered by the distinguished Prof. Eli Geddings, of Charleston, S. C., in the South Carolina Medical College. The book was published in 1858, and met with a cordial reception.

Dr. Logan was also president of the New Orleans Academy of Medicine in 1872, and president of the New Orleans Medical and Surgical Association in 1876. He was a member of the South Carolina Medical Society; of the Academy of Medicine, Richmond, Va.; of the Orleans Parish Medical Associa-

tion; of the Louisiana State Medical Association, and the American Medical Association. He was vice president of the Board of Administrators of the Charity Hospital, and one of the most valued of the lecturers at the Tulane University.

Dr. Logan was married in September, 1871, to Mary Virginia, daughter of Hon. Geo. N. King, formerly judge of the Supreme Court of the State of Louisiana. He leaves seven children—four boys and three girls, one of the latter being married to Mr. James McConnell.

Dr. Logan was an old* member of Louisiana Lodge No. 102, F. and A. M.—*Times Democrat*.

STAPEDECTOMY.

One of the most obstinate affections that worry the soul of the physician is the deafness due to chronic dry catarrh of the middle ear. Much has been written on the etiology and pathology of the condition but the therapeutics were always in a very unsatisfactory condition, until these latter days, when surgeons, emboldened by the success of antisepsis, dare to invade cavities that for centuries were regarded as sacred against intrusion. The peritoneum is no longer a *noli me tangere*; it is slashed open on the slightest provocation by the rising young gynecologist. The cranial cavity is no longer a region of dark, impenetrable recesses, but, on the contrary, the surgeon, guided by his knowledge of cerebral localization, can cut and chisel along well defined paths without fear of wandering off into dangerous and unknown byways.

For a long time the aural cavities remained undisturbed; they enjoyed the protection afforded by the conservatism that is born of fear and ignorance. The history of the early operations on the drum-membrane gives us glimpses of the courage of a few brave spirits who tried to cast off their fetters and boldly attack disease. The backward state of pathology and other branches of medicine prevented these innovators from

making any real advance in aural surgery. Nowadays, when intense activity marks all lines of scientific research, the light thrown on the disease of the ear clears up mysteries that long made otology a very unsatisfactory branch of medicine.

The sclerosis of the lining membrane of the middle ear forms a mechanical obstruction to the transmission of the atmospheric vibrations to the percipient terminal filaments of the auditory nerve. The link in the chain of transmitting agents most seriously affected is the chain of ossicles. When the joints of these bonelets become stiffened, the vibrations are more or less suppressed, and diminished hearing power is the result. The problem that confronts the otologist is, to remove the obstruction and allow the vibrations to be felt in the labyrinth as they were felt before the disease began. All of the articulations are involved, but the most important one of the lot is that between the foot-plate of the stapes and the oval window; if the others are loosened and this one remains ankylosed, no improvement will take place.

The pathology of the disease being known, the broad and general indication was clear, namely to remove the obstruction. It is supposed, of course, that the auditory nerve is unaffected. The manner of overcoming the obstruction remained to be worked out. In 1875 Kessel, of Jena, removed the malleus and incus with the whole of the drum membrane. In 1885, Schwartze again called attention to the operation which he had himself performed, and in 1886 Dr. Sexton, of New York, reported the results of a number of operations of removal of the ossicles, which he at first performed for the relief of otorrhœa, and afterward to improve the hearing.

These operations, however, left behind one very important structure, the stapes; and with stapedio-vestibular ankylosis no possible good could result from the removal of the malleus and incus. This fact was clearly recognized by Dr. Frederick L. Jack, of Boston, who offers stapedectomy as a substitute for the other operations for the relief of chronic dry catarrh of the middle ear. In the *Boston Medical and Surgical Journal* Dr. Jack describes minutely the various steps of the operation, and the instruments used.

It was formerly feared that a marked and abrupt change

in the intra-labyrinthine pressure would produce serious results, but the experiments of Botey and others on the lower animals showed that the labyrinth could be invaded and maltreated without giving rise to any lasting disturbance.

Miot suggested and practised mobilization of the stirrup to break up the adhesions around the foot-plate. He did that at a time when men feared to open the labyrinth. This mobilization gave temporary relief. The adhesions were broken up, it is true, and the anchylosis for the time being was corrected; but cicatricial bands re-formed, and in time the anchylosis became worse than it had been before, and the deafness became more marked. Dr. Jack went one step further: he removed the stapes bodily without disturbing the other two ossicles. Jack's verdict is summed up in the following words: "Not only is the simple removal much better in its result, as shown by the operations already performed, but on the ground of conservative surgery it is much to be preferred. It produces greater improvement in the hearing, and, according to my experience up to the present, there has been no inflammatory reaction whatever, or any other bad results."

Doctor Jack's operation is an addition to operative nosology; there is no description of the operation prior to his attempts. When we pass in review the history of middle ear surgery and finally contemplate the results of Jack's operation we are struck with the slowness of progress in this line of work, and wonder why somebody did not think of it before. It is just the thing that is wanted in intractable dry catarrh of the middle ear. But it is so in nearly every line of work; the pioneers cut their way through an unknown wilderness, while those who come after profit by their experience, and build where their predecessors had only the time to hew out paths.

Abstracts, Extracts and Annotations.

MEDICINE,

IODIDE OF STRONTIUM IN CARDIAC AND OTHER AFFECTIONS.

The clinical application of iodide of strontium has been retarded on account of the extreme difficulty which was first experienced in procuring a chemically pure and at the same time a stable salt.

The facility with which commercial iodides give up their iodine, and the frequent presence of the toxic iodate, has on more than one occasion been commented upon at the French Academy of Medicine, and it has been found necessary to issue a caution against the strontium iodide in any other than the crystallized form.

The most practical mode of manufacture is to decompose a solution of iodide of iron by sulphide of strontium. The resulting solution is rapidly filtered in an atmosphere deprived of oxygen, and the sulphide of iron separated; the solution of iodide of strontium is then evaporated, crystallized and recrystallized several times, in order to obtain a perfectly pure salt, unchanged by the action of the air and light.

Iodide of strontium crystallizes in hexagonal tables containing six molecules of water.

The question of absolute purity is very important, otherwise it rapidly decomposes when exposed to the air.

The problem of producing a stable and crystallized salt, without which exact physiological observation was hitherto impossible, has been solved by *paraf-javal*. From the investigations reported to the Biological Society, May 28, 1892, it was shown that the action of iodide of strontium on the circulation of animals is similar to that of iodide of potassium.

Practical clinical experience with strontium iodide has fully confirmed the supposition that the iodide of strontium would present the same advantage over the potassium salt as its bromide analogue, and a series of observations was undertaken by one of us, on account of the non-poisonous character of the salt as compared with potassium iodide.

Observation 1. A lady *æt.* 50, with chronic endocarditis, and an enfeebled action of the heart, suffered from considerable dyspnœa together with symptoms of angina pectoris. The patient was treated for some time with iodide of potassium, which gave considerable relief, but she was unable to continue

its use any longer on account of the gastric irritation to which it gave rise. The *standard solution of strontium iodide* (30 grains to the ounce) was therefore substituted, beginning with one tablespoonful, subsequently increased to two tablespoonfuls daily. The change proved eminently satisfactory, and within twenty-four hours a marked improvement in the symptoms was observed and the amelioration was maintained by its continued use.

Observation 2. A young professor, affected with a cardio-pulmonary affection, characterized symptomatically by attacks of depression at times, taking the form of angina pectoris with a state of incomplete syncope. The heart presented signs of chronic endocarditis.

The patient had been benefited by iodide of potassium, but was unable to continue its use, even in small doses of from 15 to 20 grains daily, without gastric derangements, which prevented the proper functions of digestion and alimentation. He was very weak, discouraged, and a prey to attacks of præcordial agony. A tablespoonful of the *standard solution of iodide of strontium* was administered, and increased later to a tablespoonful and a half daily. The effect was most remarkable, and in a few days he was able to resume his occupation, and gradually the functional phenomena to which he was subject disappeared, the nutritive functions improved, and a fair condition of health is now established.

Observation 3. Our patient is a talented artist aged 50 years, who has suffered for a long time with endocarditis, localized on the left side of the heart, and of the auriculo ventricular orifice, with arterio-sclerosis and a complication with considerable gastric ectasis, and rebellious dyspeptic conditions. He is subject to attacks of depression which recently have become of extreme gravity and which affect his respiration, causing a loss of consciousness and a fear of death. Small doses of iodide of potassium had previously helped him, but had to be abandoned. A tablespoonful of iodide of strontium solution was prescribed, and after the third day there was considerable improvement of the cardiac functions and the dose was increased to two tablespoonfuls daily; this was continued for a month; the attacks of oppression and præcordial agony had disappeared, and there was considerable improvement in nutrition.

Observation 4. The patient is a powerful man, 40 years old, who is subject to frequent attacks of neuro-muscular rheumatism, which manifested themselves on the heart by phenomena of pain, dyspnœa and præcordial oppression. Auscultation demonstrated a commencement of endocarditis, and particularly of the aortic ventricular orifice. The patient had never been

subjected to any special treatment for this [cardiac complication. Two table-spoonsful of *solution iodide of strontium* were administered, which was perfectly tolerated. Under its influence the dyspnoea and oppression disappeared entirely in the course of two months.

Our conclusions upon these and other observations show that iodide of strontium, by its favorable and rapid action in morbid cardiac and cardio-pulmonary troubles, is superior and preferable to iodide of potassium, for in no case has any symptom of intolerance, such as cephalalgia, coryza, with nasal and salivary hypersecretion, cutaneous eruptions, etc., been noticed.

It is therefore permissible, on the physiological and clinical evidence, to consider iodide of strontium as an excellent substitute for the iodide of potassium, with this considerable advantage, that, although the dose is the same as that of the potassium salt, it may be increased when necessary without having to fear the intolerance which would almost certainly follow larger doses of the latter.

The indications for the use of iodide of strontium are of course those of iodide of potassium, in which are included cardiac and cardio-vascular affections due to arterio-sclerosis; lesions of the myocardium and intra-cardiac orifices, asthma, angina pectoris, and in chronic and muscular rheumatism and gout, it is also indicated in the treatment of that large class of skin affections recognized to be amenable to iodine, also in inflammations of a strumous type.

It may be advantageously employed in inflammatory conditions, such as pleurisy, peritonitis either simple or tuberculous, pericarditis, certain forms of pneumonia and in pulmonary emphysema.

This medicament is clearly indicated moreover in the treatment of enlarged glands, such as the amygdalæ, in mammary hypertrophy and in enlargement of the uterus or prostate.

Iodide of strontium does not set up gastric irritation or cause palpitation of the heart. It is speedily eliminated by the kidneys, while in its various applications the special action of the iodide is supplemented by the beneficial effects which strontium has been proved to exercise on the functions of nutrition.—*Tribune Medical*, December 15, 1892.

VARIED USES OF THE NEWER ANTIPYRETICS.

Introduced as modifiers of temperature some of the medicaments of the aromatic schema appear to have been especially useful in the multiform conditions presented to the general practitioner. Phenacetine, especially, is widely called for in

daily practice, and it seems to have given good results even in obstinate conditions. In sciatica, for example, Dr. J. D. Blake (*Medical World*, Oct.) directs the use of this medicament. He gives iodine, colchicum, etc., for the constitutional manifestations and phenacetine for the pain. He writes: "Give phenacetine, grs. v when the pains are severe. A few doses will suffice. Try it." Professor Hare (*Coll. and Clin. Rec.*, Aug.) gave, in the treatment of supra-orbital neuralgia, cod liver oil, adding phenacetine, grs. v, three times daily. Dr. W. Minaker (*Medical World*, Sept.) says: "An excellent combination for the treatment of malaria, and one which answers equally well with the large doses of quinine, is phenacetine, quinine and salol of each 2 grs., repeated every three hours." A noticeable feature in the above instances of medication by phenacetine is the small size of what seems to be considered an effective dose of phenacetine. Dr. Porter (*La. Sem. Med.* No. 19, 1892) recommends phenacetine as a substitute for preparations of opium. He gives it in $2\frac{1}{2}$ -grain doses in combination with minute quantities of salicylic acid, cocaine and exalgin. Probably the phenacetine alone, in 5-grain doses, would be better, as salicylic acid is not usually well borne, and some practitioners do not like to prescribe cocaine in simple conditions.

ASTHMA.

The treatment of asthma Prof. Da Costa divided into three heads. First, that *for the paroxysm*: Give a plentiful supply of fresh, pure air and some remedy to relieve the spasm—ether (internally, twenty drops) or chloroform or chloral; also dry cupping the chest and some slightly nauseating agent which will promote expectoration. Apomorphia is very useful; so are the salts of ammonium. Other remedies that may be used for the spasm are to burn paper that has been saturated with nitrate of potassium (nitre paper), inhalation of steam, and strong, hot coffee.

Secondly, remedies *to prevent the paroxysm*: Smoke stramonium. This is undoubtedly effective, and may be smoked in an ordinary pipe or thrown on a hot coal and inhaled. Belladonna is useful, as is also the combination of belladonna, camphor and stramonium in the form of cigarettes. Nitrite of amyl may prevent it, but can not be depended on.

Thirdly, the treatment *to get rid of the disease*: Change of air; each case is a law to itself. Colorado and New Mexico are the best climates. The food should be plain and

no heavy suppers. The bowels should be kept open and the patient should be dressed warmly. Remedies that may be used are arsenic, which is excellent; nitro-glycerine ($\frac{1}{200}$ - $\frac{1}{100}$ grain three times a day) and the nitrates; preparations of iodine (iodide of sodium) in cases of lung complications. Blisters are of no use. It is very important that the patient's urinary secretions should be looked after.—*Col. and Clin. Record.*

SURGERY.

THE NECESSITY OF FINDING THE CAUSE OF RECURRENT EARACHE WHICH SUBSIDES WITHOUT APPARENT INJURY TO THE EAR.*

By **HIRAM WOODS, M. D.**, of Surgical Staff at the Presbyterian Eye and Ear Hospital; Professor of Diseases of the Eye and Ear at Woman's Medical College, Baltimore.

No physician of considerable practice can have failed to have patients consult him on account of recurring earache. In some cases the pain comes in paroxysms of two or three hours' duration, disappears, sometimes spontaneously, sometimes only after the use of hot applications and anodynes, and returns after a long or short interval. Again, there are no distinct paroxysms of pain. The individual is conscious now and then that his ear hurts him. It never confines him to the house and he may make only an incidental allusion to it when he happens to feel a pang, or thinks of the matter when with his physician. While by no means always so, the first class is usually made up of children, the second of adults. One will find, I think, that the subsequent histories of such cases divide them in three groups: (1) those who "outgrow," as it is called, the earache, or at any rate cease to have the attacks, and retain good hearing; (2) those who continue to have occasional paroxysms, or else now and then feel a twinge of pain, without the development of any special symptoms, save a slight, and possibly transient, defect in hearing; (3) those who after an attack of earache have a serous or purulent otorrhœa. This may subside and leave the ear still useful, but nevertheless impaired, or it may become chronic.

The earache may be a trivial matter. Again, it may be a symptom of inflammation, which will soon show itself by a discharge, or else be the only appreciable indication of conditions which can cause slow changes in the ear and lessen its useful-

* Read before the Medical and Chirurgical Faculty of Maryland, at Easton, November 15, 1892.

ness. If the diagnosis "earache" be looked upon as good and sufficient, and therapeutics be limited to relieving the patient's suffering, *possibly* no harm will be done; but in the majority of cases important things will be overlooked, and harm will result. The object of this paper is to make a brief study of these cases of earache with special reference to their effects and causes. Barring furuncular and diffuse inflammation of the external auditory canal, painful affections of the ear are due, usually, to catarrhal inflammation of the tympanic cavity, or to reflex neuralgia of the ear from some cause outside of the ear itself. Canal inflammation generally shows itself clearly enough and need not be considered. Of catarrhal inflammation of the drum cavity, many cases pursue the typical course of hyperæmia of the tympanic mucosa, exudation into the drum cavity, perforation of the drumhead, and the establishment of an otorrhœa. Pain is the most prominent symptom of the stages of hyperæmia and exudation, and it is relieved when the drumhead ruptures. But all cases do not go so far as perforation.

There is hyperæmia of the tympanic mucous membrane, and examination of the ear with the head-mirror, reflected light and ear speculum reveals the vascular changes in the drumhead characteristic of acute aural catarrh; but there is never the bulging of the drumhead indicative of exudation, hearing may not be greatly impaired, the drum can be inflated through the Eustachian tube, and the trouble does not go beyond the stage of hyperæmia. There are a great many such cases of abortive acute aural catarrh observed in an aural clinic. Tympanic hyperæmia may occur once or twice as the result of cold or exposure, and subside without serious results; but when it occurs again and again, two things become manifest: (1) the usual results of repeated hyperæmia will probably ensue in the tympanic cavity, and (2) these must be some cause of these attacks more or less closely connected with the ear. That acute catarrh of the tympanum is the most common cause of the repeated earaches frequently observed in children is the opinion of such authors as Woakes, Roosa and Buck; but the pain soon subsides, the hearing continues good, and nothing more is thought of the matter till the next attack. If more care were taken to make the tests, there is little doubt but that the hearing of ears which have passed through two or three such attacks would be found impaired. Still, as one can lose nearly one-half of the normal hearing power without being specially inconvenienced, the slow deterioration is not noticed for a long time. This gradual lessening of the hearing power after repeated tympanic hyperæmia is the result of connective tissue formation in the mucous membrane covering

the walls of, and ossicles in, the drum cavity. The ossicles become adherent to the walls of the cavity at the points where they touch, the joints between the ossicles become anchylosed, and so the power of conducting sound-waves to the nervous ear is lessened.

Again, as this thickening advances, the tympanum becomes less able to withstand fresh attacks, and so an otorrhœa is apt to eventually result, with all its attendant inconveniences and perils; nor do the dangers from tympanic catarrh, not diagnosticable except by objective examination, and presenting only symptoms of severe pain in the ear, stop at the point mentioned. Such attacks are very common among infants. Woaks thinks convulsions are often caused by pressure upon the labyrinth, from an exudation into the tympanum due to an acute aural catarrh, resulting from dentition. He, Politzer and others describe a fold of the meninges, which in infancy passes through the petro-squamosal suture into the drum. Cases of fatal meningitis may thus develop before the tympanic inflammation has caused rupture of the drumhead. While such results may be rare, certain it is that the ultimate production of a foul otorrhœa in infants after one or more neglected attacks of earache during dentition is a common occurrence. Possibly the ear is not thought of as a source of pain, until the appearance of the discharge. Deaf-mutism can thus result if the hearing becomes greatly impaired before speech has been learned, even if the child escapes the more fatal dangers of an otorrhœa.

Having thus reviewed some of the consequences of tympanic catarrh, of which *pain* is usually the only symptom, I beg to lay stress upon the facts that earache is only a *symptom*; that diagnosis must extend to the discovery of its cause; that if this cause, in turn, is due to other abnormal conditions, they must be found; that the therapeusis of earache, especially recurring earache, must go further than the relief of pain. There is not the space in the limits of this paper to enter into the therapeusis of tympanic catarrh, appropriate as such a course might be. To some of its causes, too frequently overlooked, I desire to direct attention.

Chronic abnormalities of the naso-pharynx are a prolific cause of tympanic catarrh. Follicular pharyngitis, post-nasal vegetations and hypertrophied tonsils are, in my experience, the most common throat lesions observed in connection with recurring earache. It is, I think, a more or less common belief that, if chronic follicular pharyngitis does not cause so much throat discomfort as to call attention to itself, or if post-nasal adenoid vegetations do not interfere with nasal respira-

tion, these troubles may be left alone. That they can produce deafness and recurring hyperæmia of the tympanum without special throat or nasal symptoms, I do not think admits of doubt. Situated, as they often are, near the pharyngeal mouths of the Eustachian tubes, these inflamed follicles or vegetations act as irritants, increase the vascularity of the tubes, and cause an Eustachian catarrh. This can reach the tympanum by direct continuity of mucous membrane.

Again, as soon as ventilation of the tympanum through the Eustachians is hindered, and the air already in the tympanum has been absorbed—no renewal taking place through the tubes—atmospheric pressure in the external canal drives the drum-head inward, producing undue pressure upon the ossicles. Impairment of hearing and tinnitus usually follow at once. If unrelieved, hyperæmia and pain follow. Relief comes as soon as the Eustachians again admit air to the drums. Inflation by Politzer's method promptly removes the ear symptoms and the application of a nitrate of silver solution to the mouths of the tubes lessens the secondary catarrh; but it will surely return, unless the primary trouble is removed. As regards enlarged tonsils, their importance from an otological standpoint has been exaggerated. Probably they rarely occur unaccompanied by other morbid conditions of the throat, which more immediately affect the ear. By lessening the air space, they may, indeed, produce these conditions. This will certainly be the case if they interfere with nasal respiration. The same is true, however, of any conditions which block the nostrils. Mouth breathing is a well known cause of pharyngeal disease, and when nasal respiration is impeded in persons suffering from ear symptoms, it should be re-established. Still, so far as the *direct* influence of hypertrophied tonsils upon the ear is concerned, Roosa states that it is doubtful if they ever enlarge to the extent of pressing upon the mouths of the tubes. He advises their removal upon the grounds I have advanced, that they may "affect the health of the pharynx." I have seen patients cured of middle ear disease by the removal of post-nasal vegetation, although hypertrophied tonsils were also present. Another source of danger to the ears from nasopharyngeal disease is direct microbic invasion through the tubes. This undoubtedly occurs.

Occasionally one will observe a patient who has earache, and possibly defective hearing, and find one or more of the throat lesions mentioned, but the examination of the ear will be negative. The drumhead does not present any increased vascularity. Evidently there is no tympanic inflammation. The pain is not so severe or lasting as in tympanic catarrh. It is

felt as a shooting neuralgic pain in the ear. I have had under my care two sisters who have shown this condition. One consulted me for occasional attacks of deafness and earache some time ago. I reported her case in the *Maryland Medical Journal*, of December 26, 1891, in an article upon post-nasal vegetations as a cause of deafness. I frequently examined her ear when painful, but there was no inflammation. When I removed the vegetations with Mackenzie's forceps she experienced severe pain in both ears. Her sister has follicular pharyngitis and tonsilitis. Earache with her is not a marked symptom, but her hearing has been poor. I have, however, often produced an otalgia, or ear neuralgia, with her by simply pressing the tonsils with a probe, or applying an applicator to the naso-pharynx.

I experienced myself last spring a definite and painful proof of the power of throat disease to cause reflex earache without inflammatory changes. I was suffering from an attack of acute tonsilitis on the left side. The afternoon of the second day, my left ear gave me some pain. This steadily increased until by night it was agonizing. I obtained some relief from anodynes, but very little. I could still hear fairly, and could inflate the drum through the Eustachian. Early in the morning I sent for Prof. Chisolm. I feared that he would find an acute aural catarrh. Greatly to my relief he did not. His words were: "It is reflex. The drumhead is not even congested." The correctness of his diagnosis was proven by the sequel. I obtained some relief from the large doses of salicylate of sodium he ordered, but the pain did not cease till my tonsil was well. No ear trouble followed. These cases prove, I think, the power of throat lesions to produce a purely neuralgic earache. Whether or not this reflex can eventually cause organic lesions in the ear, I am not prepared to say; still, they bring us straight back to my theme—the necessity of finding the cause of earache. In the cases of the two sisters mentioned, the causes were of themselves capable of damaging the ears through the Eustachians. The channel of transmission in these cases was almost certainly the glosso-pharyngeal nerve, which supplies the tonsils, pharynx and tympanum with sensory fibres.

The teeth, and more particularly dentition, constitute a source of ear disease which is not sufficiently appreciated. The occurrence of otorrhœa in babies during dentition is frequently observed. Earache in infants, I am sure, is not always recognized as promptly as it should be. I see babies with otorrhœa whose clinical history is very clearly read backward from the otorrhœa to dentition, but the pain the little one

then had in the ear was not attributed to that organ. I have now a little patient, nineteen months old, who first had otorrhœa when one year old, the sequel of measles. Both ears are affected. Twice have I succeeded in stopping the discharge, and twice has the boy had a relapse, each time at the cutting of a new tooth.

Sexton, of New York, who has given the subject of oral irritation careful study, considers irritation from the mouth a most prolific cause of ear disease. He goes so far as to condemn amalgum fillings, vulcanite plates and retention of teeth which have lost their nerve pulp as dangerous to the integrity of the ears. I have tried to make some clinical observations upon this subject. While I have seen nothing to lead me to accept all Sexton says, I have over and over again seen earache, sometimes accompanied by hyperæmia of the drumhead, and sometimes not, cured only after a carious tooth had been removed or cleaned out and filled.

The channel of transmission from the teeth to the ears may be directly through the fibres of the fifth from the dental to the auriculo-temporal branch. This may be the case in those patients whose trouble is only *pain* of a reflex character, unaccompanied by inflammatory changes; but it will not explain the acute aural catarrh and suppurative otitis of dentition. Two explanations of these lesions are given: (1) extension of the inflammation from the gums to the middle ear by direct continuity of tissue; Roosa says he has seen this. Woakes, (2) on the other hand, holds that the intermediate tissues are healthy, and offers, as an explanation of the tympanic catarrh. vaso-motor disturbance. He traces the irritation from the teeth along the afferent sympathetic fibres accompanying the dental branches of the fifth to the otic ganglion. Here the nervi vasorum of the carotid plexus are met and receive reflex irritation. This causes dilatation of the tympanic branch of the internal carotid going to the drumhead. Thus a hyperæmia of the drumhead is produced. Its vessels anastomose freely with those of the drum cavity, and tympanic hyperæmia results—the first step in the production of tympanic catarrh.

Justifiable conclusions from the foregoing are that the diagnosis in cases of recurrent earache must include the condition of the drumhead, pharynx, nose and teeth; that therapeutics must include the treatment of disease found in these structures.

THE EXTIRPATION OF PERIPHERAL ANEURISM.

A CASE OF ANEURISM ART. TIBIALIS ANTICUS AND ONE OF ANEURISM OF THE ART. POPLITEUS. FROM THE SURGICAL CLINIC OF DR. REIGNER, GENERAL HOSPITAL, Breslau.

[Translated from the *Berliner Klinische Wochenschrift*, October 31, 1892, by Dr. T. M. McINTOSH, Thomasville, Ga.]

Of the numerous methods which have been adopted for the treatment and removal of peripheral aneurism, all have, in a great measure, been uncertain in their results and not unaccompanied with danger. Among them are the direct compression of the swelling, ligation of the afferent artery, forced flexion, acupuncture, electropuncture, and the injection of blood-clot forming substances into the aneurism; ergotine injections into the surrounding tissue—all of which more or less quickly were abandoned.

The only methods which to-day come into question are digital compression, with or without previous envelopment in the elastic bandage; the ligation of the afferent artery, and the extirpation of the sac, after the manner of Philagrius.

The digital compression—that is, the method modified by Ried, by previous envelopment of the limb with the elastic bandage, has quite a number of results to exhibit, and will yet hold its place as the bloodless method. It is far enough advanced to admit of certain prediction of result, and in unselected cases it is not without danger. A fair picture of its results is given in the work of Delbet, who in a period of ten years collected 266 cases of popliteal aneurism, in 73 of which, treated by the method of Ried, 36 were cured; of the 37 uncured there were five fatal results; 59 cases treated by digital compression, above 29 were cured, and 4 ended fatally.

Digital compression should only be regarded as a trial method, and must be confined in its adoption to very small tumors, which have not produced serious disturbances, and it is supposed that the heart must be sound, and there must be no general or far advanced disease of the vascular system, and especially that the afferent artery is not in an advanced state of atheromatous degeneration. Ligation of the afferent artery has quite a number of favorable results to its credit. Of 112 cases which Delbet has collected, there were seventy-nine cures; a result from cases during the last year, by English authors, is made better. On account of the ease and simplicity of its performance the operation has had a wide-spread adoption, and has brought the oldest method of Philagrius and Antillus in almost complete forgetfulness. But the field of its use is limited. If the vessels are sound, so that there is a rapid development of the collateral circulation, its appli-

cation can be useless, as the aneurism by the collateral vessels can be filled again; or if by pathological changes of the vessels the collateral circulation is impeded, as is sometimes the case in the spontaneous aneurism of old subjects, gangrene may develop and necessitate an amputation; therefore, recently the methods of Antillus and Philagrius have been brought into use.

Aside from this, the method is that by which the diseased sac can be most rapidly and radically removed, and being so, is the danger of gangrene lessened, as only a small part of the vascular system is removed; besides, the serious complications, as suppuration and after bleeding, which in the beginning, so quickly made the operation fall into disuse, can now by the modern aseptic operation be completely avoided. Nevertheless there is difference, even to the last year, in the views of eminent English and French surgeons in regard to the method. While Trelat, Peyrot and Delbet prefer the extirpation of the circumscribed arterial aneurism as well as the arterio-venous swelling, Reclus, Championniere and others prefer to ligate the afferent artery, even Reclus, as well as Bowey, the Anel's method of tying just above the sac. During the past years, extirpation of the sac has been much practised by German surgeons. While Sonnenberg in 1886 collected twenty-five cases of extirpations of popliteal aneurism with nine fatal cases, four of which were due to sepsis, the latest publications show good results, and sacs not alone of the popliteal artery but of different vessels, posterior tibial (Helferich), subclavian (Trendelenberg), axillary, (Schoff) int. carotid (Scriba).

Two cases from the surgical wards of Prof. Riegner will illustrate the applicability of this method. Case 1, in a young, strongly built laboring girl, 19 years old, tumor in the right popliteal space due to a fall striking against edge of the bed, three months before. The tumor reached 10 cm. above and 3 cm. below the line of flexion, and by lateral extension had a triple lobed form. The circumference of the thigh 5 cm. above the patella was, right, 43 cm.; left, 36 cm.; over the patella, right, 46 cm.; left, 35 cm. Tumor dense, elastic, without fluctuation, movable and somewhat sensitive to pressure; pulsation and blowing noise were not present; the second tendon showed beginning gangrene, and no pulsation of the art. dorsalis pedis or tib. post. was found.

The diagnosis was between sarcoma and aneurism, though, despite the absence of all the pathognomonic signs of aneurism, leaned to that, because of the slight gangrene. This last demanded an immediate operation, which was done November 13 by Esmarch's bloodless method. After cut-

ting through the skin and fascia the greater part of the tumor was found attached to the surrounding tissues, which, with its lateral growth, made it impossible to remove it entirely, and, therefore, it was split open in its entire length. It consisted of a dense sac, which was filled completely with fibrinous clot, which being shelled out, the removal of the sac and its separation from the veins and other tissues was easily done; all visible vessels were tied with catgut. After the removal of the bandage, and ten minutes' compression of the wound, it was necessary to tie a few bleeding veins. The wound was washed out with a 6 per cent. sterilized soda solution packed with iodoform gauze and sewed almost entirely up. On the first day there was severe pain in the foot, which disappeared on the second permanently. The circulation very quickly re-established itself, and a few hours after the operation the tendon showed a red color and sensibility. By December 12 the wound was almost completely filled by granulations, the limb could be used quite normally, no pain, the scar in the space was but of little trouble, and the patient was almost ready for work.

The second case was an aneurism of the anterior tibial of the size of a child's head. The patient was a book-keeper, 25 years old, usually of good health. November 12, 1891, admitted to hospital. He had seven years before wounded himself with a pocket knife, under the knee joint, from which there was profuse bleeding.

In three or four weeks this was well and gave no further trouble. Within a year's time there was a swelling of the leg, which disappeared by bandaging. Since the beginning of the year he had noticed a swelling below the knee, which gradually became larger, and in the last six weeks had grown very rapidly, during which time he had severe pain in the leg. There was a slight effusion into the knee joint, and a large tumor of the size of the head of a child on the outer side the head of the tibia. The calf of the leg, as well as the ankle joint, were much larger than that of the opposite leg. The tumor began 5 cm. under the lower border of the patella, and in its long diameter was 15 cm. on the upper border. There was a scar a little to the outer side of the middle line and movable, 2 cm. by 1 cm. in size.

Over the largest portion of the tumor the leg was 50 cm. in circumference, while that of the normal leg was 35 cm.; just above the ankle the circumference was 31 cm., normal leg 25 cm. Pulsation was plainly felt in the tumor, which was visible by placing the stethoscope upon the tumor, and disappeared by compression of the femoral artery; auscultation gave a loud systolic blowing noise. There could be no doubt of the diagnosis of aneurism of the ant. tibial.

There could be no doubt but that the wound, inflicted seven years before, produced the aneurism. The position of the anterior tibial artery, directly in apposition to the interosseous ligament, is so well protected that it is rarely the seat of an aneurism. In the limited literature of this subject, Arnaudet mentions a case occurring twenty-two days after a fracture of the leg; and Sidney Jones one nine days after a complicated fracture of the same. Bell describes one case of spontaneous origin, situated just over the ankle joint. All of these makes it probable that the wound of the knife was the cause of the aneurism.

The operation was done on December 15, and without Esmarch's bandage, that the portion of the artery above the tumor might be easily found. An incision was made from a point between the crest of the tibia and head of fibula downward, over the highest portion of the tumor to the middle of the ankle joint. The artery was tied in the lower third of the leg below the tumor and separated from the veins. The artery above the tumor could not be reached through the incision. It was then attempted to shell out the tumor, which reached above to the tuberosity of the tibia—below, to the middle of the leg. In the beginning this was easily done; only laterally and above was the sac closely adherent to the surrounding tissues, and so by a somewhat decided pull it was torn through, and considerable dark blood flowed out, which was checked by tamponing the sac and compressing the femoral artery. The effort to isolate the sac up to the afferent artery was found impossible, and the popliteal artery was laid bare to the interosseous ligament, and now, even, the point of division was not to be reached, so the popliteal was tied as deeply as possible by double ligature and cut through. The sac was now removed without special loss of blood, except that on the interosseous ligament there was much adhesion, in the separation of which it was necessary to tie some bleeding vessels. The total loss of blood was not great. The wound was washed out with a 6 per cent. soda solution, packed with iodoform gauze, and the skin brought together by suture. The leg was placed in a somewhat elevated position. The course of the wound was quite normal, except a slight slough of the skin of the leg. The wound of the joint healed by primary union. On January 28, wound was fully closed. There was some paralysis of the peroneal muscles, which by massage and electricity gradually grew better. For a time a tightly fitting shoe was worn, with elastic traction to turn foot outward and upward. March 5, patient left hospital free from pain and resumed his work.

In both the cases the operation and course of the wounds

were quite free from difficulties or complications. They were both traumatic aneurisms, in which the afferent artery was sound, and after-bleeding was, therefore, hardly to be expected. This danger is not much greater in spontaneous aneurism than after the simple ligature. As according to Bowley (the artery near sac is not oftener diseased as further up) one can, if there is an exceptionally high degree of pathological change of the artery at the aneurism, remove a small piece of it with the sac.

The much feared after-bleeding of former times by the separation of the ligature was also less a matter of concern than the suppuration and other complications which disturb the course of the wound. Therefore, if the most rapid and easiest cure is reached, the ligature of the artery and splitting of the sac after Antyllus will not be tried, but its extirpation after the manner of Philagrius. The detachment of the sac can be quite difficult if the aneurism is an extensive one, especially if the walls are thin, and is closely adherent to the surrounding tissues. When it is possible with Esmarch's bloodless method to carry out the operation, as in our first case, one can empty the sac and remove it piecemeal. This bandage is not always practicable, however, owing to the seat of the aneurism and other conditions contraindicating it. If the vascular system be diseased, then the long constriction by the bandage should not be done without hesitation, as it may lead to a thrombus or a new aneurism, as such cases have been observed after simple digital compression. The finding of the artery by the use of Esmarch's bandage is made difficult, and, if the aneurism is firmly adherent to the accompanying vein, its injury is much more to be feared than when it is distended with blood.

Finally, after the removal of the rubber constrictor, quite an amount of hæmorrhage can occur from the wound.

If one will dissect the sac in its entire length quite freely and ligate the main stem of the afferent and efferent artery, the hæmorrhage, by Esmarch's method, will not be important. The bleeding from any detached firm adhesions can always be checked by ligature or compression, and if the sac should be torn through, the hæmorrhage, after the ligature of the main branch, is not so great that it can not also be stopped by compression. The danger of gangrene is, of course, the less the more the collateral blood vessels are left undisturbed. This is less by extirpation, where only a small vascular territory is taken out, than by the simple ligature, which must be done some distance above the sac, and also blood return into the sac by collateral branches may make the operation illusory in result.

A reference to the first case is interesting in this respect: that the extension of a beginning gangrene of the foot was prevented by the removal of an aneurismal tumor producing the lack of nutrition—its size, in all probability, retarding the circulation thereto. Schopf has made a similar observation in a case of aneurism of the right subclavian and axillary arteries. From this he concludes that in aneurisms in which a clot has formed, or where it is produced by therapeutic means, if there is, from the size of the tumor, trophic changes due to the mechanical hindrance of the collateral circulation, that the tumor should be cut down upon and the sac extirpated.

The extirpation of an aneurism is consequently and properly recently again coming into use, and will no more be destined to fall into disuse as when first introduced, but will remain as a method occupying the first place in the treatment of peripheral aneurism.

TREATMENT OF ISCHIO-RECTAL ABSCESS AND FISTULA-IN-ANO.

By HENRY R. WHARTON, M. D. Read before the Philadelphia County Medical Society, November 23, 1892.

Treatment of Ischio-rectal Abscess.—In this form of abscess the purulent matter occupies the loose cellular tissue of the ischio-rectal fossa in close relation to the rectum, and from the anatomical peculiarities of the tissue in which it is situated it is apt to burrow widely and, if left to itself, to open into the rectum or through the skin into the region of the anus, and result in the production of one or other forms of fistula-in-ano, either the complete form or the external or internal incomplete form of this affection.

To obviate this unfortunate result the prompt treatment of ischio-rectal abscess is urgently demanded, and I am decidedly of the opinion that attempts at abortive treatment of this form of abscess are worse than useless, that by such treatment valuable time is lost, and the surgeon has finally to resort to surgical treatment after extensive burrowing of pus has occurred with possibly perforation of the wall of the rectum.

It is, and has been for a long time, a surgical axiom that an ischio-rectal abscess should be opened promptly, and if so treated the probability of a fistula-in-ano resulting is much diminished. I formerly was satisfied to open these abscesses by a small incision, evacuate the pus, and in many cases a prompt recovery took place without the formation of a fistula, but in others a fistula resulted; whether the rectal communica-

tion was present at the time of opening or resulted from the imperfect drainage secured by a small incision I am unable to say, but I am sure that the results I have obtained in these cases during the last few years since I have adopted Mr. Allingham's method of dealing with the abscesses have been much more satisfactory. By this method of treatment, even in cases where I have been able to demonstrate a rectal communication at the time of the operation, I have secured healing without the formation of a permanent fistula. Therefore, in any case of inflammation of the tissues of the ischio-rectal fossa, whether the evidence of abscess be clearly demonstrated or not, I follow the method which is recommended by Mr. Allingham, which consists in etherizing the patient and placing him in the lithotomy position, after having located the position of the indurated tissue or abscess; and a rectal examination by means of the finger will often assist in locating the position of the abscess. A free incision, several inches in length, is made through the tissue, outside and parallel with the fibres of the external sphincter muscle, and the incision is gradually deepened until the pus cavity is reached. It is then slit up to the length of the skin incision and the cavity is explored with the finger, breaking down any loculi which tend to divide up the abscess cavity, and so make one cavity of the abscess. The cavity of the abscess is next washed out with a 1:2000 bichloride of mercury or 1:60 carbolic acid solution, and is then packed with strips of iodoform gauze, and a pad of the same gauze is placed over the wound, and over this a pad of bichloride of mercury cotton is laid, and the dressing is secured in position by a T-bandage. An opium suppository is introduced into the rectum and the bowels are kept quiet for three or four days.

The dressing is not removed for two or three days, and at this time the packing is usually loose and can be removed without difficulty, and after its removal the cavity is injected with peroxide of hydrogen, and it is then irrigated with a 1:2000 bichloride of mercury solution, and next the cavity is lightly packed with strips of iodoform gauze and the wound is covered with a pad of iodoform gauze and bichloride cotton. The same steps are observed at subsequent dressings, which are made at intervals of two or three days, and the cavity usually heals rapidly by granulation and contraction, and in a few weeks it is usually completely healed.

Mr. Allingham recommends that the cavity be packed with lint saturated with carbolized oil, and I have employed this material, but now prefer to use the iodoform gauze, as I stated above.

I will report briefly a case in which this treatment was adopted. In January of this year I saw, with Dr. Musser, a lady, forty years of age, who had suffered for a few days with inflammation of the tissues of the ischio-rectal fossa. On examination of the case I found the left buttock for a distance of six or eight inches from the very verge of the anus indurated, hot and painful; no soft spot of pointing could be detected. An examination of the rectum showed bulging of the walls of the rectum in the left side, and upon withdrawing the finger a small amount of pus escaped from the anus. The patient also stated that some matter had been discharged from the rectum during the day. The patient was etherized and a curved incision four inches in length was made just outside of the line of the sphincter muscle. This was gradually deepened until the cavity of the abscess was opened and a free discharge of pus, many ounces, escaped. On introducing my finger I found that the cavity extended laterally for some distance and passed upward between the wall of the rectum and the sacrum. In fact, with my two fingers introduced their full length in the wound I could not reach the upper portion of the abscess cavity. A careful examination failed to reveal the position of the opening into the rectum. The abscess cavity was thoroughly irrigated with a 1:2000 bichloride of mercury solution and was then packed with strips of iodoform gauze, and a pad of gauze and bichloride cotton was placed over the external wound and held in place by a T-bandage. The patient did well after the operation, and the cavity was dressed in the same manner every second or third day for the first two weeks, and at less frequent intervals after this time for six weeks, at which time healing was complete.

There is no question in my mind that there existed a communication between the abscess cavity and the rectum before the operation, as was shown by the discharge of pus, and by the discharge from the wound about a week after the operation of a piece of bone a little larger than a grain of corn. This bone Dr. Harrison Allen examined for me and pronounced it to be a portion of a transverse process of a sheep's vertebra. It had been swallowed with the food and had ulcerated through the wall of the rectum, and had set up inflammatory action in the peri-rectal cellular tissue, terminating in this extensive abscess.

The points in the treatment of ischio-rectal abscess I would especially call attention to are: Early and free incision; thorough breaking down of any secondary abscess cavities into one cavity; irrigation of the cavity with peroxide of hydrogen and a 1:2000 bichloride of mercury solution or 1:60

carbolic acid solution; packing with iodoform gauze and subsequent dressing made in the same manner, care being taken not to pack the cavity too firmly. Following this form of treatment the results of this variety of abscess in my hands have been most satisfactory.

Treatment of Fistula-in-ano.—Ball classifies fistula-in-ano as complete rectal fistula in which there is a sinus leading from the rectum to some point in the skin in the region of the anus; and the incomplete fistula he describes as internal rectal sinus, a sinus passing from the rectum into the peri-rectal cellular tissue; external rectal sinus, one having an opening on the skin passing into the cellular tissue around the rectum, but not perforating the wall of the gut.

As regards the treatment of fistula-in-ano, the fact should not be lost sight of that it is possible to have a fistula-in-ano heal under simple treatment without operative interference. This is more apt to occur in recently formed fistulæ, but as the result of palliative treatment is always uncertain in these cases, and a long course of local applications is required, this method of treatment is not generally adopted. Allingham says that he has had twenty-one successful cases under this method of treatment, and a number of cases in which he was unable to effect a cure after prolonged treatment. When this form of treatment is adopted it consists in trying to obliterate the fistulous track by rest, free drainage and the local use of stimulating applications, such as carbolic acid, nitrate of silver and sulphate of copper. Rest to the part is best secured by the wearing of a firm anal pad, secured by a T-bandage.

At the present time the most widely adopted and successful treatment of complete fistula-in-ano is by incision. The patient is etherized and placed on his side or in the lithotomy position; a probe-pointed flexible director is then passed through the external opening of the fistula and conducted into the rectum; the finger is then passed through the anus until it comes in contact with the end of the director, which is bent and brought out of the anus; the tissues on the director are then divided with a scalpel or by means of scissors, care being taken to see that the division of the fibres of the sphincter muscle is made at a right angle to the course of the muscular fibres; oblique divisions of the muscle do not heal well and are apt to be followed by a loss of power in the muscle. The main track of the fistula being slit up, it is next explored for the presence of branching sinuses, and if these are found they are slit on a director. In indurated sinuses it is often well to make an incision through the base of the sinus, which seems in many cases to facilitate the healing. If the cutaneous edge of the

fistula or sinuses tend to overlap each other near the anus they should be trimmed off with scissors. The surface of the exposed fistula or sinuses is next freshened with a curette, and after being washed out with a 1:2000 bichloride of mercury solution the cavities are packed with strips of iodoform gauze or lint, saturated with carbolized oil. A compress of gauze is next applied over the wound, and over this is placed a pad of bichloride cotton, and the dressing is held in place by means of a T-bandage. The patient is given an opium suppository, and the bowels are kept quiet for three or four days.

The after-treatment of fistula-in-ano is most important, and many unfavorable results are due to carelessness in this particular. On removal of the primary dressing, at the end of two or three days, the sinus should be washed out with peroxide of hydrogen and a 1:2000 bichloride of mercury solution, and a strip of iodoform gauze should be lightly passed to the bottom of the wound and allowed to rest between its edges. The mistake is often made of packing these wounds forcibly, which interferes with healing. A piece of gauze and a pad of cotton is next applied over the wound and is held in place by a T-bandage. The patient should be kept on his back two or three weeks and the wound should be dressed in the manner described daily or on alternate days, and at the end of three or four weeks healing is usually completed.

In cases of fistula-in-ano of the horseshoe variety, one division only of the external sphincter muscle should be made, and the branching sinuses should be laid open by curved incisions passing parallel with and outside of the line of the muscle. Sinuses extending to the perineum or buttock should be freely laid open.

The treatment of incomplete fistula of the external variety or of external rectal sinus consists in passing a director into the sinus down to the rectum, and if on passing the finger into the rectum it is found that the director is separated only from the finger by the mucous membrane, and its position is low down in the rectum, it is better to push the director into the bowel and bring it out at the anus and divide the tissues as in complete fistula, and treat the resulting wound as described after the operation for complete fistula. If, on the other hand, the rectum is merely exposed at the bottom of the sinus, it is well to lay the sinus freely open to this point, curette its surface and pack it lightly with iodoform gauze. Subsequent dressings should be carefully made and the sinus will usually heal, though the course of treatment usually extends over a longer period of time than in cases where the sphincter muscles have been divided.

In internal incomplete fistula or internal rectal sinus, when the rectal perforation is low down, a bent director should be passed into the anus, and its point should be passed through the rectal opening and made to project on the skin near the anus. This is cut down upon and exposed and the director is pressed through it, making the fistula a complete one, and the tissues on the director are divided. The subsequent steps of the operation and dressing are similar to those mentioned in the cases previously described.

When the rectal opening is high up and it is considered inadvisable to divide the sphincter muscle or the bowel to its full extent, a director should be passed through the internal opening and the surgeon should cut down on its point from an incision through the skin a little outside of the sphincter muscle. When it has been exposed the sinus or cavity should be curetted and irrigated and dressed with iodoform gauze, and by careful dressing the wound may be made to heal from the bottom, the rectal communication being shut off by granulation and subsequent contraction.

Among various methods of treating fistula-in-ano should be mentioned the elastic ligature and the treatment by excision.

The elastic ligature is principally used in those cases in which the fistula opens into the rectum at a high point, where division by the knife would be accompanied by free hæmorrhage. When applied, a cord of india-rubber one-sixteenth of an inch in diameter is threaded to an eye-probe which is passed through the cutaneous opening into the rectum and brought out at the anus; before tying the ligature, the skin and mucous membrane to the edge of the anus should be divided so that the ligature can bury itself when tied, thereby saving the patient pain and at the same time facilitating the more rapid division of the tissues by the ligature. After the ligature has cut its way through the tissues it is often found necessary to dress the wound in the same manner as in cases where incision has been practised to secure satisfactory healing.

The treatment of fistula-in-ano by excision has been recommended by some surgeons. The fistulous track being dissected out, the parts are brought together by deep sutures, and if primary union is obtained there is a great saving in the time of treatment. The form of fistula in which this method of treatment is best suited is the complete fistulæ, which are not very deep and have a straight course; branching fistulæ, and those very deeply situated, I do not think are favorable cases for this procedure. If in using this method of treatment it is found that primary union has not occurred, as shown by the escape

of a little pus from the line of the incision, the sutures should be removed and the edges of the wound should be separated, and it should be lightly packed and treated—in fact, as a case in which primary incision had been practised.

As fistula-in-ano often occurs in patients suffering from phthisis, the question of the advisability of operating upon these cases must often be considered. The rule in these cases is to operate unless the patient's disease is in a very advanced state when no repair could be likely to take place. In the majority of phthisical cases the result of the operation is satisfactory.

The only serious complication following the operation for fistula-in-ano is incontinence of fæces, and this is fortunately a rare complication. It may be guarded against by care in dividing the sphincter muscle only at one point, and by seeing that the division of the muscle is not an oblique one. When incontinence exists, it may be relieved in many cases by excision of the cicatrix in the sphincter muscle, and by suturing the freshened ends of the muscle together by catgut sutures, or by applying a point of Paquelin's cautery to the cicatrix, or to several points of the mucous membrane and skin of the anal margin.—*College and Clinical Record*.

THE TREATMENT OF GONORRHŒA.

My treatment of gonorrhœa in all stages has for long been very monotonous. Almost without regard to stage or degree of severity, I prescribe the same remedies. I have long ago laid aside the traditions of my student days, which taught that salines only should be used in the acute stages, and that abortive plans were dangerous. I always use abortive measures, and mostly, I believe, succeed. At any rate, I never encounter ill consequences, and complications are rare. My prescription is a partnership of three different remedies, and it is, I believe, important that they should be used. First, an injection of solution of chloride of zinc, two grains to the ounce; next, sandalwood oil capsules; and lastly, a purgative night dose with bromide of potassium. The injection is used three or four times a day, capsules (ten or twenty minims) taken three times a day. The ingredients of the night doses are three drachms of Epsom salts and a half drachm of bromide of potassium. It is, I believe, the action of the last named in preventing congestion of the parts which makes the abortive measures safe. Moderate purgation and entire abstinence from stimulants are essential. If the case is very acute, and attended by swelling of the corpus spongiosum, I sometimes prescribe tartar emetic or tincture of aconite, but it is very seldom, indeed, that these are necessary. If the patient be well purged,

there is no risk whatever in an abortive treatment from the day that he comes under treatment. The risk of orchitis, prostatitis, cystitis, etc., comes in cases which have been allowed to develop rather than in those treated abortively. I should as soon think of delaying to use local measures in gonorrhœa as I should in purulent ophthalmia.—*Jonathan Hutchinson, in Archives of Surgery.- Columbus Medical Journal.*

THE SURGICAL SIGNIFICANCE OF DUST.

During the first years of the antiseptic era, the atmosphere was held responsible for many of the septic conditions developed in wounds which we have since learned to attribute to other causes. In those times no operation, however trivial, was undertaken without the use of the spray, and the utmost attention was paid toward keeping the wound protected from the air. The perfection of our antiseptic technique and the excellent results of the aseptic method have served to relegate the doctrine of air infection to the background, as is evidenced by the almost universal abolition of the spray during surgical operations. Thanks to the advances made in bacteriology, it is now recognized that the sources of wound infection are far more often to be sought in neglect of cleanliness, unclean hands and instruments, improperly prepared dressings, than in an impure condition of the atmosphere. In other words, the doctrine of direct contagion has supplanted that of infection through the air. It can not be denied, however, that the condition of the air in operating rooms and sick chambers exerts some influence upon the healing of wounds; and it will, therefore, be of interest to briefly review the results obtained by Dr. Carl Hægler (*Beitrag zur Klinischen Chirurgie*, Bd. 9, 1892), who has made the question of aerial infection the subject of an elaborate bacteriological investigation. The stimulus to undertake this extensive work was furnished by two cases of erysipelas, for which no cause, save aerial infection could be assigned. An examination of the air and dust of the ward occupied by these patients revealed a number of pathogenic organisms, chiefly staphylococci and streptococci, the virulence of which was shown by inoculation experiments on animals. Want of space forbids us from going into the details of the author's subsequent investigations of the air of operating theatres, hospital wards, lecture rooms, laboratories, etc., which were undertaken with extreme care. In all these places pathogenic microbes were found in comparatively large numbers, and in view of this fact Hægler concludes that the air must be considered as one of the factors of wound infection, although not a prominent one

The manner in which these organisms are disseminated in the air is not difficult to understand. Staphylococci and streptococci occur in normal saliva and nasal mucus and by spitting and sneezing become mixed with atmospheric dust. They are found on the superficies of the body, in the normal urethra, in the finger nail dirt, etc. They reach the air, however, in far larger numbers from the surface of suppurating wounds or dressings which have been in contact with them.

Since the dry aseptic method of wound treatment has come into vogue, and moist dressings are less employed, the danger of admixture of pathogenic organisms with atmospheric dust is greater than formerly owing to the fact that during removal of the dry dressing particles of desiccated pus are frequently carried into the air, while this is less likely to happen if the wound be kept moist. Although these sources of atmospheric contamination are acknowledged by many authorities, most of them assume that the organisms are so rapidly destroyed in the atmosphere that they can not prove injurious. Hægler's experiments show, however, that streptococci and especially staphylococci preserve their vitality for a long time in the dry state in the air. He remarks that atmospheric infection frequently becomes a contact infection, the germs falling into the wound from the air, the hair and clothes of the operator and assistants, and being rubbed into the tissues by instruments, sponges, etc.

From his experiments the author deduces the practical conclusion that a thorough moistening of the air with steam—not by an atomizer—frees it almost completely of microbes within a comparatively short time; and that wetting the floor, walls and furniture of the room prevents a fresh contamination of the air. The time required to purify the air will depend upon the rapidity with which the room can be filled with steam. During removal of dressings, especially if they be dry, there should be as little movement in the room as possible, so as to avoid stirring up dust. If dry dressings have been employed they should be moistened before removal, so that particles of pus crust may not be disseminated in the air, and the dressings should be placed in moist receptacles and burned. Operation rooms should be disinfected with steam, and the hair, beard and clothing of the surgeon and assistants should be moistened to prevent the accidents mentioned above. It will thus be seen that while under stringent antiseptic and aseptic precautions, septic conditions in wounds can be avoided in the vast majority of cases, the possibility of atmospheric dust acting as a source of infection should not be ignored, and every means should be taken to insure pure air in operating rooms and hospital wards.—*International Journal of Surgery.*

A PHYSIOLOGICAL STYPTIC.

According to the London correspondent of the *Therapeutic Gazette*, Dr. A. E. Wright's new styptic is the outcome of considerations on the factors which determine coagulation. It occurred to him that the best way of controlling hæmorrhage would be to imitate as closely as possible one of nature's own methods and produce natural coagulation in the blood. Now the addition of fibrin ferment to the blood is in itself sufficient to hasten its coagulation. We know, besides, that the coagulability of blood is dependent on the proportion of lime salts contained in it, blood absolutely deprived of these being uncoagulable. Combining these two ideas, Dr. Wright has prepared his styptic, which is a solution of fibrin ferment, together with 1 per cent. of calcium chloride. The efficiency of this solution, when applied to severe wounds in animals, is, as the writer has himself seen, very remarkable; a small quantity applied with a swab of cotton-wool being sufficient to almost immediately arrest the hæmorrhage, which is ordinarily very profuse. The solution is prepared as follows: The blood of cattle or sheep is received direct into about three times its volume of water, is set aside to gelatinize for a few moments, and then thoroughly whipped with twigs. The fibrin thus obtained is gently washed, so as to free it from blood pigment, and then extracted for about twenty-four hours with five to ten volumes of water. To the filtered extract is then added 1 per cent. of calcium chloride. The great advantage, besides its efficiency, is that the process of occlusion by a natural coagulum is one which is calculated to do least harm to surrounding tissues. The action of the styptic is perfectly selective, being exerted on nothing but the blood with which it is brought in contact. No other styptic so thoroughly fulfils this condition.—*New York Medical Times*.—*Med. Age*.

THE DANGER OF COUNTER-IRRITATION IN LOCALIZED TUBERCULOSIS.

According to Parrochia Anacleto, counter-irritation in localized tuberculosis is attended with great danger. Miliary tuberculosis spreads so rapidly from one organ to another by way of the veins and lymphatics that any irritation set up at the seat of the primary mischief can not fail to increase the tendency of the disease to become general. Four cases which have recently come under his notice show this in a remarkable degree. Tuberculosis progresses slowly, but it allows of no

violent remedies, and, he thinks, until some method of treatment more successful than either the injection of tuberculin or cantharidate of potash, or the application of blisters has been discovered, the danger of causing general infection by their adoption will still remain.—*Lancet*.

OBSTETRICS.

COMPLETE LACERATION OF THE PERINEUM AND ITS TREATMENT.

Clinical lecture delivered at the Jefferson Medical College Hospital, November 8, 1892. By E. E. MONTGOMERY, M. D., Professor of Gynecology, Jefferson Medical College.

GENTLEMEN—During the last two lectures the subject of consideration has been lesions of the pelvic floor, more particularly those in which there was not so much loss of the perineum as there was of rupture of its supporting muscle, the levator ani, resulting, consequently, in prolapse of the posterior wall of the vagina. Prolapse of this wall through the vulvar orifice is known as a rectocele. The protrusion of the anterior wall is called cystocele. I hope, however, none of you, when asked "What is a cystocele?" will be guilty of giving an answer such as I received from a graduate of another school, who was applying for an endorsement of his diploma. He said it was "A cyst containing fluid." In the anterior wall of the vagina the intimate relation of the bladder leads to prolapse of a portion of this viscus; in the posterior wall, however, the rectum is much less intimately connected, so that it is not always prolapsed with the protrusion of the vaginal mucous membrane. In this patient you notice the vulva stands open. There is a protrusion from it. As I ask this patient to bear down, you notice that the protrusion is considerably increased. It is increased by the mere effort of abdominal pressure. Mere inspection in such a case discloses the condition. The fact that the mass is more prominent from the anterior backward is an indication that it arises here from the anterior wall and not the posterior. The protrusion is continued upon the anterior surface, which shows very readily that we have not a rectocele. The projecting mass in no way involves the posterior wall of the vagina. My finger readily passes in to the vagina behind this mass, which shows without question that it is a prolapse of its anterior wall; if it were a prolapse of the posterior we would find the finger pass in front of it. In this case you would probably say that there was prolapse of the

vagina, but upon examination of the patient I find the uterus is somewhat depressed, yet the protruding mass is not the uterus but the anterior wall of the vagina. The diagnosis is readily made in these cases by making pressure against the mass. If the uterus were situated in it we would find projecting from its summit the cervix with the external os. Patients, in a condition of this kind, you will find, suffer more and more the longer the duration of the trouble. As the prolapsed portion projects over the vagina it decreases the ability of the patient to evacuate the urine, and we have her consequently suffering from distress as a result. That portion of the bladder which is situated below the level of the internal os is not completely emptied, consequently it gives rise to decomposition of urine and cystitis, the presence of an ammoniacal odor and finally deposits of calcareous material and formation of calculi, these calculi sometimes attaining to large size.

Cystocele usually results from injury during parturition. It may be of the posterior segment of the vagina, causing increased strain upon the anterior segment, which, no longer supported, is finally crowded down by the intra-abdominal pressure. Most frequently, however, direct injury has occurred to it during parturition. The bladder has been partially filled, has been pushed before the head of the descending child until the fascia is torn off from one or both sides. As the anterior wall of the vagina sags down it drags upon the cervix, producing in normal conditions a displacement downward of the cervix, until finally the body of the uterus falls backward, becomes nearer to the axis of the vagina and the subsequent intra-abdominal pressure promotes the descent. This may result in complete prolapsus, or what is known as procidentia. In those cases in which the uterus is pretty well fixed, either by healthy and normal tone of its ligaments or by inflammatory exudation about it, the traction upon the cervix leads to elongation of the supra-vaginal portion, so that sometimes the cervix will project from the vagina and examination will disclose that the fundus of the uterus is at, or near, its normal position. The cervix is connected with it by a mere cord-like communication, or in some cases may be entirely separated.

I now bring before you a patient who has had a laceration of the inferior segment of the pelvic floor, on which some one has done an operation by the Tait method for its repair. It has resulted in a skin flap. It did not effectually unite posteriorly. I have introduced a probe into the vagina and brought the end of it out through this sinus in front of the anus. The operation has not resulted in a serviceable perineum in this

patient, or one which affords much relief to the symptoms from which such patients would be likely to suffer. You will hear much said in discussing the method of procedure in operations upon the perineum as to the particular operation which should be done, some advocating the flap operation, as recommended by Tait, others the Emmet operation, and so on. You should keep in mind, however, the fact that every operation on the perineum and posterior wall of the vagina is a plastic one, and no one operation is applicable to every case that may come under your observation. In some cases the one operation will be preferable, in others an entirely different one, and the operation should be adapted to the conditions in the individual, thus giving rise to opportunity for exercise of special ingenuity. The indication for the operation is not only to build up a structure at the outlet, but to restore in their proper place the muscles and re-establish the proper function. In operations upon the perineum, where the sphincter has been torn, the first indication of the operation is to re-establish the function of this muscle, and it makes no difference how apparently good the result may be, it is a failure unless this has been accomplished. The second will be to build up the perineum and replace the muscles in their normal relation. Where the laceration has extended through the sphincter, this muscle will be found situated upon the posterior surface of the anus, giving rise to a corrugated appearance of the tissue. It can be readily seen in this patient, almost as a straight line on the posterior surface of the anal orifice. Now, any operation, to be successful, in this patient, must take into consideration the restoration of the ends of this muscle in thorough apposition. In the patient I have before you, the laceration has extended into the recto-vaginal septum. There is a prolapse of the rectal mucous membrane. It becomes a serious question in such cases how we shall devise an operation that will restore these parts and build up a perineum. As considerable tissue has been removed in previous operations on this patient, we will content ourselves in splitting up the recto-vaginal septum by carrying a pair of scissors in at one side and bringing them out at the opposite side of the vulva. This line is dissected up by one at right angles with the vulva, extending backward on either side to the end of the divided sphincter muscle. The anterior portion on either side is dissected, forming anterior flaps. The posterior portion forms the posterior flap on either side. The posterior flaps are sutured together, forming the anterior wall of the rectum; the anterior flaps forming the posterior wall of the vagina. Between these is a large raw surface, which is brought in apposition by sutures, thus forming the body of the perineum. The lowest suture is introduced below the ends of the sphincter ani muscle, so that as it

is drawn tight the ends of the muscle are brought in apposition. The suture is carried round from one side, buried through the flaps, and brought out at the opposite side at the same distance from the end of the sphincter muscle. The other sutures are introduced higher up in such a way as to bring in apposition the denuded surfaces. The tying of these sutures results in the formation of an excellent perineum, and if union takes place without difficulty, the patient will have complete control of her bowels, which she has not had for a number of years. This operation is a flap operation and is known as the Simpson operation. In the operation the flaps are sutured together with catgut, introducing the suture material on the posterior flaps from within the rectum. The anterior flaps are connected in the same way. Formerly the after treatment, in such patients, was to keep the bowels locked up for ten or twelve days and the patients fed on a milk diet; the result was that the rectum became filled with a large amount of hard, fecal material which required to be broken up with the finger before it could be evacuated without danger of destroying the union. In such cases, now, we do not follow this treatment, but direct that the bowels should be thoroughly evacuated before the operation, sufficiently to make sure that no hard, scybalous materials are retained, and then for two or three days prior to the operation and for a week following it she should be kept on an animal broth diet, absolutely interdicting the use of milk. With this food there is but little waste; the patient may go for three or four days without a movement of the bowels; they should then be moved with a saline purgative and the diet continued for a few days longer. The bowels should be again evacuated before the sutures are removed. It is customary to suggest that the vagina be irrigated frequently. Nature, however, should have forty-eight hours uninterrupted, during which the plasma may be thrown out. The early administration of enemata results in washing it away, and causes defective union. The parts may be kept dusted with iodoform or aristol in combination with boracic acid. If the urine is evacuated or the catheter used, the parts should be sponged or a little water allowed to flow over them and then again dusted with powder. Regarding the urine, the patient should have the catheter used if she is unable to void it herself. It is much better where she can that the latter should be done. In the use of the catheter it is important to cleanse the vestibule with a little wet antiseptic cotton before the catheter is introduced, so that no septic material may be carried into the urethra and bladder, giving rise to irritation. Even the most careful use of the catheter will often produce abrasion of the mucous membrane of the urethra, and either urethritis or cystitis.

The instrument should be perfectly clean before it is used. It is well to have it scalded out immediately after its use and again before it is used, or it may be kept in a disinfectant solution during the intervals.—*College and Clinical Record*.

PSEUDO-MEMBRANOUS ENTERITIS.

By T. H. AY, M. HD.

My first introduction to this condition was had about one year ago, when, despairing of finding a logical cause for the many pelvic disturbances of a hystero-neurasthenic, I decided to examine the intestinal discharges for evidences of tape-worm. The first sample obtained presented the appearance of a section of tape which had undergone considerable softening. It was about twelve inches long, half an inch wide, and an eighth of an inch thick. Microscopically it proved to be composed of firm mucus filled with leucocytes. Examination of several samples showed the discharge to be constant in character, but no evidence of tape-worm was found. A portion of the discharge was given to Dr. Tower, who reported it to be a pseudo-membrane with numerous leucocytes imbedded in it. Reference to works on general medicine proved very unsatisfactory until Osler's Practice gave me a cue under the title of "Mucous Colitis." Two other articles only of any value are to be found in works of a general character—one by Wales in Pepper's System of Medicine, and one by Edwards in the Cyclopædia of Diseases of Children. An article by Woodward in the Medical and Surgical History of the War of the Rebellion is replete with references, and gives an excellent history and description of the disease. The rest of the literature of the subject is to be found mostly in scattered articles in the various medical journals.

It has been claimed that Aretacus described the condition in the second century, but Woodward asserts that Fernelius was the first to distinguish the disease, in his work on Pathology published in 1554, when he referred to the passage of inspissated mucus (*pituita concreta pituita lenta*). The first systematic description and proper classification of the disease was by Powell, in 1818, as a "painful affection of the intestinal canal;" the second by Good, in his Study of Medicine, in 1822, under the heading, "Diarrhœa Tubularis (Tubular Looseness)." Since then it has been variously referred to as membranous enteritis, pellicular enteritis, pellicular colitis, mucous colitis, chronic catarrhal diarrhœa, paraplexia rheumatism, colica pituitosa, chronic pellicular or eruptive in-

flammation of the mucous membrane of the intestine (Simpson), membranous enter-colitis (Muhlenburg), and a membrane-like affection of the bowels (Goss).

Until the time of Powell, on account of its occasional tubular form and lancinated appearance, it was generally mistaken for a discharge of the mucous membrane of the bowel. The same mistake was made about five years ago by a physician in this city, who informed his patient that she was "passing the mucous coating of her bowels," and until I saw the case she continued to think so.

Concerning the causes of the disease, there is very little known. Three facts are established: *First*, the condition is presented more frequently among women. Wales states that an analysis of one hundred cases gave only four males, two of which were children. The most complete summary of all cases reported shows about 80 per cent. of them to be females. *Second*, children are rarely affected: Edwards investigated one hundred and eleven cases, and found only six under 10 years. The four cases under my own observation occurred between the ages of 25 and 40. *Third*, by far the greater percentage of cases occur in women of a nervous character. My own were all of the hysterical or neurasthenic types. Especial reference has been made to the large proportion of the women having light flaxen hair, fair complexions and white skins.

Climate, improper food, the excessive use of cathartics, mercury, severe hemorrhoids, have all been credited with causative influence. Edwards states that "We definitely know that climate, occupation and inheritance are not to be considered predisposing causes." One of my own cases very strongly suggested the influence of climatic change. This patient, while residing in Milwaukee about six years ago, had frequent discharges of a ribbon-like character, but on removing to an inland town the discharges totally ceased. Early in 1892 she returned, and after the lapse of two months she presented samples of the discharge.

In regard to the pathology of the affection, nothing is definitely known. Writers early in this century believed it to be croupous or diphtheritic in character. Powell and Good supposed the exudation was fibrinous and similar to the "fibrous exudation thrown forth from the trachea in croup." Many of the latest writers hold that it is produced by a low-grade chronic inflammation of the mucous membrane. DaCosta and Wales doubt its primary inflammatory character, and consider it secondary to "changes in the nerves which preside over secretion and nutrition in the abdominal viscera." Osler, in the latest reference to the subject, says "it is due to a derangement of

the mucous glands of the colon, the nature of which is quite unknown." Edwards expresses simply the opinion "that if inflammation is present at all, it is in a very mild form."

The colon and rectum are the portions of intestine most frequently involved. Only a small portion of the mucous membrane may be involved, but the great quantities of membranous material discharged in some cases (measured by yards in length, or "a chamber vesselful") would indicate the involvement of a considerable surface. There are not a half-dozen post-mortem records to be found, and the two or three recorded throw no light on the morbid changes which occur. The endoscope has been used by Wales and Osler successfully. Wales records a "mucous membrane of a red, varying into a scarlet, color, thickened and denuded of epithelium in patches of varying extent." Osler says he found the membrane "closely adherent to the mucosa of the colon, but capable of separation without any lesion of the surface."

The exudation presents itself in a variety of forms, from jelly-like masses to tubular casts of considerable size. It may be shreddy or in form a thin fluid, ribbon-like and occasionally sectioned off, presenting the appearance of a tape-worm. The color may be white, gray, yellow, stained with bile-coloring or with blood. Microscopically the specimens present a structureless basement membrane, mucus, leucocytes, epithelial cells and *débris*.

Numerous chemical examinations of the discharge show it to be completely soluble in caustic potash, partly so in aq. ammoniæ, insoluble in acetic, cold nitric, or hydrochloric acid, soluble in boiling nitric or cold sulphuric acid. Careful tests for fibrin failed to show any, and only a slight amount of albumen was found. It has been satisfactorily demonstrated that the chief constituent of the membrane is mucin.

This disease is much more frequent than the silence or indifference of works on general medicine might lead one to suppose, and we have all perhaps had greater or less opportunities to observe the disease. Effort should be made to decide whether the condition is primary or secondary in character. If secondary to the general nervous disturbances in hysteria or neurasthenia, then the problem is one for the neurologist; if a primary affection, then we have a sufficient material cause for the erratic vagaries of the hysterical imagination, and the indications for treatment of hysteria are unmistakable.

The characteristic symptoms of the disease are: The passage of shreddy, ribbon-like, flaky, or tubular exudates, either with an ordinary fæcal movement or without admixture of fæces, from the bowels. There is rarely any increased tem-

perature, slight or no alteration of the pulse. The discharges are usually paroxysmal, recurring at intervals of a week, month, or perhaps a year; in some few recorded cases they have been continuous or daily. Marked digestive disturbances occur either before or after, or both, at the time of the paroxysm. There may be loss of appetite, and diarrhœa. From a day to a week before the discharge there may be abdominal pain, ranging between a general sense of discomfort and pain the most agonizing in character. This pain may be local or general in distribution.

One case complained of the sensation of a winding and unwinding spring in the right lumbar region, probably in the hepatic flexure. Within forty-eight hours following the discharge would take place. Another suffered most excruciating pain, scattered throughout the abdomen, which was followed by the evacuation. At the time of the discharge there may be considerable diarrhœa, the movements numbering from five to fifteen in twenty-four hours. Severe tenesmus is marked, with constant desire to go to stool, when there may be no movement at all, or simply a discharge of the membranous material. During these paroxysms the abdomen is markedly sensitive to pressure, and there is great gastric disturbance, flatulence and increase of the nervous accompaniments of the disease. Irritability and restlessness are increased, and marked mental depression, amounting to melancholia in some cases, may accompany the attack. Disturbances of vision and hearing may be present. One case complained of a horse, ridiculously dressed in gaudy clothes, dancing before her; another awoke to see herself being placed in a coffin, and could distinctly follow the proceedings to the grave, even to hearing the rattle of the earth upon the coffin. This patient possessed no permanent hallucinations. Neuralgia, localized, and anæsthesias or hyperæsthesias are common, and I have seen one case of paraplegia. Genito-urinary complications are frequent. Dysuria and dysmenorrhœa (membranous in one of the cases) I have seen. The urine in a fair proportion of cases is altered in character, being light-colored, containing triple phosphate uric acid, epithelial cells, and mucus. Van Valzab reports skin eruptions, liability to herpes of the genitals, furuncles, carbuncles and sore mouth. Emaciation is rarely marked, and has not been progressive in any case I have seen. None of these cases are good walkers; their locomotion seems to be characteristic of the disease, slow, deliberate, of the tight-rope variety.

W. A. Edwards reports one case which passed a membrane fourteen inches in length, and continued to pass portions

frequently for a year. This patient never experienced colic, tenesmus or abdominal tumefaction, and there was never blood in the movements. Actual knowledge of the discharge was the only evidence of anything abnormal in her condition.

The chemical and microscopical examination of the discharge makes the diagnosis easy.

The prognosis as regards life is good—patients die *with* the disease, not *of* it. I have seen two cases of apparently spontaneous cure, and heard of one cured by change of climate and a course of some unknown quack preparation; but the majority of cases are chronic in character, and probably form a fair percentage of our female professional invalids of the hysterical type who infest sanatoria and worry the profession into an early grave.

Treatment so far has practically proven a total failure. The treatment of the paroxysmal pain may be accomplished by assisting the evacuation of the membrane by castor oil or senna with an alkali, or hot water enemata, and the administration of opiates, of which codeine has afforded me the most satisfactory results.

The whole pharmacopœia has been ransacked for the treatment of the interval between the paroxysms. Good, in 1822, recommended the administration of small doses of mercury in blue pill or Plummer's, the bowels to be kept open by daily administration of sulphur and the internal use of copaiba—per rectum, if necessary. Since then, opium, belladonna, ergot, sulphate of iron, arsenic, the preparations of nux vomica, cubebs, pitch and tar, turpentine, iodides, bromide of potash, sulphate and arseniate of copper, cod liver oil, pancreatin, application to the abdominal wall of blisters, tincture of iodine, and fomentations of hydrochloric acid, have all been tried without satisfaction.

The enemata have been legion. Sulphates of zinc and copper, nitrate of silver in increasing strengths, tr. iodine and carbolic acid (of which Wales speaks very highly) locally applied in strong solutions, bismuth, saponaria and taraxacum, tannic and gallic acids, have all been tried.

Removal of rectal pockets was tried in one case by a one-time surgeon in Milwaukee, without appreciable results. Electricity has been highly recommended, but has afforded me no satisfaction. My best results have been obtained by good hygiene, generous diet, and iron, arsenic and strychnia. Anæsthesia and hyperæsthesia are best treated by the faradic current; insomnia by some of the later hypnotics, of which I prefer chloralamide.—*Medical Age.*

MORTUARY REPORT OF NEW ORLEANS.

FOR DECEMBER, 1892.

CAUSE.	White	Colored...	Male.....	Female...	Adults ...	Children.	Total
Fever, Yellow							
“ Malarial (unclassified)...	6	5	11		10	1	11
“ Intermittent							
“ Remittent	5	1	5	1	5	1	6
“ Congestive							
“ Typho	5	4	7	2	7	2	9
“ Typhoid or Enteric.....	3	2	4	1	5		5
“ Puerperal							
Influenza.....	1			1	1		1
Scarlatina							
Measles							
Diphtheria	4	3	4	3		7	7
Whooping Cough							
Meningitis	3	1	1	3		4	4
Pneumonia.....	22	21	29	14	25	18	43
Bronchitis	14	6	13	7	9	11	20
Consumption	35	38	40	33	72	1	73
Cancer	10	3	5	8	12	1	13
Congestion of Brain.....	5	1	5	1	2	4	6
Bright's Disease (Nephritis) ...	17	7	13	11	21	3	24
Diarrhœa (Enteritis)	26	13	20	19	26	13	39
Cholera Infantum	2	1	1	2		3	3
Dysentery.....	5	4	4	5	8	1	9
Debility, General	4	3	3	4	7		7
“ Senile	16	13	17	12	29		29
“ Infantile	9	6	11	4		15	15
All other causes	186	99	170	115	186	99	285
TOTAL	378	231	363	246	425	184	609

Still-born Children—White, 36; colored, 15; total, 51.

Population of City—White, 184,500; colored, 69,500; total, 254,000.

Death Rate per 1000 per annum for month—White, 24.58; colored, 39.88; total, 28.77.

F. W. PARHAM, M. D.,
Chief Sanitary Inspector

METEOROLOGICAL SUMMARY—DECEMBER.

STATION—NEW ORLEANS.

Date.....	TEMPERATURE.			Precip. in inches and hundredths..	SUMMARY.
	Mean	Max.	Min..		
1	78	59	68	o	Mean barometer, 30.051.
2	77	59	68	o	Highest barometer, 30.391, 22d.
3	78	62	70	o	Lowest barometer, 29.612, 31st.
4	77	60	68	o	Mean temperature, 55.8.
5	78	64	71	o	Highest temp., 79, 13th; lowest, 23, 27th.
6	76	62	69	T.	Greatest daily range of temperature, 25, 12th.
7	72	60	66	.95	Least daily range of temperature, 5, 20th.
8	61	46	54	o	MEAN TEMPERATURE FOR THIS MONTH IN—
9	52	46	49	T.	1871..... 56.0 1877..... 56.0 1883..... 60.6 1889..... 64.0
10	56	42	49	o	1872..... 51.0 1878..... 51.0 1884..... 59.0 1890..... 56.0
11	56	42	49	T.	1873..... 56.0 1879..... 60.0 1885..... 53.0 1891..... 56.0
12	71	46	58	T.	1874..... 59.0 1880..... 53.0 1886..... 52.0 1892..... 56.0
13	79	64	72	.36	1875..... 62.0 1881..... 59.0 1887..... 53.0
14	67	57	62	o	1876..... 48.0 1882..... 54.0 1888..... 51.0
15	65	56	60	T.	Total deficiency in temp'ture during month, 23.
16	78	59	68	.30	Total deficiency in temp'ture since Jan. 1, 432.
17	59	47	53	.67	Prevailing direction of wind, N.
18	59	45	52	.64	Total movement of wind, 6439 miles.
19	73	48	60	.24	* Maximum velocity of wind, direction and date,
20	48	43	46	o	40 miles, from E., 19th
21	53	42	48	o	Total precipitation, 3.22 inches.
22	54	39	46	o	Number of days on which .01 inch or more of
23	54	36	45	T.	precipitation fell, 8.
24	67	49	58	.21	TOTAL PRECIPITATION (IN INCHES AND HUNDREDTHS)
25	70	52	61	T.	FOR THIS MONTH IN—
26	52	30	41	o	1871..... 1.46 1877..... 4.96 1883..... 3.47 1889..... 0.67
27	38	23	30	o	1872..... 5.25 1878..... 8.69 1884..... 8.01 1890..... 2.58
28	43	29	36	o	1873..... 1.79 1879..... 2.90 1885..... 4.38 1891..... 3.93
29	50	31	40	o	1874..... 3.27 1880..... 6.45 1886..... 2.57 1892..... 3.22
30	61	41	51	o	1875..... 5.15 1881..... 6.62 1887..... 1.56
31	67	55	61	.45	1876..... 9.57 1882..... 4.27 1888..... 3.68
					Total defic'y in precipitation during month, 1.52.
					Total defic'y in precip'n since Jan. 1, 6.27.
					Number of cloudless days, 8; partly cloudy
					days, 7; cloudy days, 16.
					Dates of frost, —.
					Mean maximum temperature, —.
					Mean minimum temperature, —.

NOTE.—Barometer reduced to sea level. The T indicates trace of precipitation.

* To be taken from any five-minute record.

R. E. KERKAM, *Local Forecast Official.*

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Original Articles.

[No paper published or to be published in any other medical journal will be accepted for this department. All paper must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a written order for the same accompany the paper.]

HOW TO EXAMINE A PATIENT WITH NERVOUS DISEASE.

By LANDON CARTER GRAY, M. D.,

Professor of Diseases of the Mind and Nervous System in the New York Polyclinic.

In examining a patient afflicted with nervous disease, distinction must be made between one suffering from an organic affection and one who has a functional disease. In the former case the precise condition must be ascertained of the muscles, the sensations, and the reflexes. The muscles should be examined for atrophy and for hypertrophy. Atrophy can be readily recognized by the loss of contour of the muscle, and by the lessened resistance upon palpation. Hypertrophy may be of the true or false variety. In the former case there is an actual overgrowth of the muscular fibre, so that not only is the bulk of the muscle increased, but its strength is also augmented. In the spurious form, however, the place of the muscular tissue is taken by fat, and although the muscle may retain its outline, or even be larger than normal, the loss of its muscular tissue renders it weak, so that it may happen, as I have shown in a photograph in my recent Treatise upon Nervous and Mental Disease, that a seemingly robust-looking individual can not move a muscle. Testing the strength of a muscle, therefore, will make the diagnosis between a false and a true hyper-

trophy. There are two kinds of reflexes, the cutaneous and the tendinous. The cutaneous reflexes consist of the cremaster, the plantar, the mammary and the abdominal. The cremaster reflex can be examined by having the patient stand up, so that the testicles and the penis hang, and then scratching gently with the nail or a blunt instrument along the inner side of the thigh, when the testicle will be seen to be drawn up.

The plantar reflex is a contraction produced in the muscles of the leg, or even of the thigh, by tickling the sole of the foot or by pricking it with a needle, or applying a sponge dipped in hot water. The mammary reflex is the erection of the nipples evoked by tickling the breast. The abdominal reflex is the contraction of the muscles of the anterior abdominal wall when the skin over the abdomen is irritated by the finger nail, or by a blunt, cold or hot object. The upper part of this reflex is known as the epigastric reflex. The tendon reflexes, as the name indicates, are the reflexes of the tendon of the muscle as contradistinguished from the reflexes of the muscle itself. As every muscle has a tendon, so every muscle should have a tendon reflex, but practically the only tendon reflex which we can test in health is that of the quadriceps extensor tendon, constituting the so called knee jerk or patellar reflex. As this quadriceps tendon plays over a flat surface, the tibia, below which is the flail-like leg, the patellar tendon reflex is more fortunately situated than any other in the body for clinical testing. Its analogue, the triceps reflex, is often not obtained in healthy individuals, and the other tendon reflexes of the different muscles are practically unobtainable in the normal condition of the human body. The knee-jerk, therefore, is the tendon reflex that must be tested. This can be evoked in several ways.

The patient can be made to cross one knee over the other, and whilst the leg is thus hanging, percussion can be made upon the tendon of the quadriceps extensor as it is stretched over the flat surface of the tibia. In order to make a percussion hammer I extend the middle finger of the right hand, place the index finger back of it so as to support the distal phalanx, and the thumb in front of it in a corresponding situation. If this knee-jerk is feeble it can generally be made more forcible by what is known as the method of "reinforce-

ment," which simply consists in directing the patient to lock the fingers of each hand and pull them forcibly apart, or by directing him to perform some muscular effort, or wink, speak, or cough, laugh, etc. The jerk forward of the foot following the tap upon the tendon should be observed for two kinds of phenomena: First, the amount of muscular movement; and second, the spasmodic element evident in the muscles. Thus, a simple increased jerk may be obtained, or a spasmodic one, or there may be a combination of the two. It may often be difficult to determine what is the normal knee-jerk because the range of the normal is so great, but a spasmodic element, a quick, jerky twitching forward, is always abnormal, even when the muscular range of the movement is small. The knee-jerk varies very greatly in health and may at times be entirely absent.

The different senses that should be tested are those of smell, taste, sight, hearing, muscular sense, pain sense, temperature sense and the sense of touch. Smell can be best tested by means of the pure odors, such as violet, musk, assafoetida and oil of cloves. One nostril should be gently closed with the finger whilst the other is tested. In all these cases any disease of the nostril must be excluded, and the pungent odors should never be used, such as ammonia, alcohol, etc., which make their impression rather upon the filaments of the trigeminus than upon the olfactory fibres. The testing of sight, involving as it does the determination of errors of refraction, is too complicated a matter to be treated in a cursory review of this kind. Of great importance, however, is it to determine whether sight is good for all parts of the visual field, and whether there is any impairment in the different segments of it. This can be determined by having the patient close one eye and look fixedly with the other at some one object, and then holding a handkerchief or a piece of chalk at the sides above and below, so as to ascertain whether it is equally well seen in all parts of the normal range of vision. An impairment of the lateral field of vision is called *hemianopsia*, and this, as is evident, may either be bilateral or unilateral. In testing the sense of taste it should be remembered that the gustatory filaments of the tongue come from two different

nerves, the anterior two-thirds being supplied by the lingual through the fibres derived from the chorda tympani (a branch of the facial), whilst the posterior third is supplied by the glosso-pharyngeal.

The test should be made by means of a bitter, such as quinine; by a sweet, such as sugar; by a sour, such as vinegar; and by a salt, such as common salt. It is best to test successively with sugar, then salt, then vinegar, and last of all with quinine, as the bitterness of the latter will blunt the gustatory impressions if it be first used. The patient should be made to protrude the tongue; first one posterior half and then the other should be tested, and after this the anterior half, the patient having been instructed beforehand not to draw in the tongue and allow it to come in contact with the roof of the mouth, but to indicate whether he tastes the substance by shaking the head for negative and bending the finger in an affirmative. The best method of testing the sense of touch or tact is to see if the patient can distinguish between different substances lightly brought in contact with the skin, such as a piece of cotton, or a silk handkerchief, or the touch of the physician's finger. In order to do this with the fingers, for example, the patient's eyes should be closed and something held in front of them, the finger tips should be lightly touched, first with the cotton, or a silk handkerchief, and then with the physician's fingers, and the patient should tell which is which. There is an instrument known as the *æsthesiometer*, consisting of a movable slide upon a horizontal bar which is measured off into inches or meters and millimeters.

By means of this, the distance which the two points need to be separated in order to be felt as two points can be determined, and this distance has been found to vary in the different areas of the skin. But the *æsthesiometer* is apt to lead to confusion with unintelligent people, and therefore the best method is the test which has been described. In testing for medico-legal purposes or where there is any suspicion of malingering, it may be necessary to resort to indirect tests with the tactile sense. Thus, if a person claims that he has lost the sense of touch and can not feel the difference between silk, cotton, and the finger, the subject may quietly be changed and an opportunity sought for during the examination to lightly

touch with the finger the part that is claimed to be anæsthetic when the patient's attention is attracted to something else. In this way I have often detected malingerers. The best test of the sense of pain is by what is known as the hidden needle, which is concealed within a hollow cylinder, a spring being attached to the upper end. This spring in its turn is attached to a spiral thread running up and down a slot by the working of a little circular cap. The instrument is placed upon the patient's skin, very few people knowing what it is, and the needle is pressed quickly down and inserted into the flesh.

In any doubtful case, however, the best test can be made by means of an electric battery. This should be examined beforehand in order to ascertain that a powerful current can be turned on at will. Small handles, covered with sponge or absorbent cotton and wet with warm water, should be placed upon the skin at a distance apart of a few inches. A gentle current should be first used, and if the patient claims that no pain is felt, a feint should be made for a minute or two of testing with this gentle current, and then, after the examiner has apparently satisfied himself that no pain is felt and the patient is thrown off his guard, a powerful current should be suddenly turned on. This, however, will not be conclusive, because the patient may really have an impairment of the sense of pain and yet not an absolute loss of it, so that a lighter current might really not be felt, whilst the most powerful current would be. But in many instances this will cause the patient to break down at once and admit that he is shamming. If he does not do this the examination should be resumed, and it should be determined what current is **really felt**, and by this time a sham patient will usually have become so demoralized that any further shamming will be easily recognized, whilst a partial anæsthesia in a truthful person will have been determined.

The muscular sense should be tested by bending a joint or a limb with the patient's eyes blindfolded and then having the patient tell what movement is made. In the slighter degrees of impairment of the muscular sense the small joints can be moved without the patient's knowledge, whilst the larger ones can not, and there must be a high degree of anæsthesia when a larger joint or a whole limb can be moved without the patient

being aware of it. The temperature sense can be determined by filling three tumblers, or test-tubes, with water, one being cold, one lukewarm and one hot, and then having the patient tell which is which with blindfolded eyes. Care must be taken, however, that the eyes are blindfolded before the water is brought into the patient's presence, otherwise the slight steam from the hot water or the greater transparency of the cold water may be noted.

Besides these particulars, the degree of muscular strength and of muscular co-ordination should be determined. The best means of testing the strength of the hand-grasp is, I think, the one which I have devised. I give the patient my hand in such a way that he can not grasp it above the fingers, so that he can not hurt me unless he possesses unusual strength, because my fingers will roll over one another and prevent him from obtaining a firm hold. All civilized mankind is expert in hand-grasps, and therefore it is a ready method. The strength of the different muscles of the body must be determined by individually testing them either singly or in groups. This requires some anatomical knowledge, however, and degrees of impairment can not be so readily determined as with the hand. The test for muscular co-ordination is a test in order to determine whether the muscles act together harmoniously as they do in healthy persons.

The best test for the lower extremities is to have the patient walk along a straight line, such as a crack in the floor or a straight line running through the carpet, and do this with the eyes closed, so as to be entirely dependent upon the sensations coming through the sensory nerves of the lower extremities. Inco-ordination of the extremities can be tested by having the patient shut the eyes and then swing the arm up from the one side of the body with a long, swinging movement, so as to touch the tip of the nose with the tip of the forefinger, when inability to co-ordinate the muscular movements will be seen by a failure to bring the finger to the nose, the finger either hitting the side of the nose or wavering as the nose is approached, or in the severe cases hitting only the side of the head or the ear, or failing to perform any purposive movement to the nose. This is called *motor ataxia*. The ataxia which

a person has in the trunk in the sitting position is called *static ataxia*, and it can be seen by the swaying and inability to maintain steadily upright the trunk of the person who is seated. In these tests for inco-ordination, or *ataxia*, great care must be exercised to have the patient's eyes closed and not to have him touch with the hand any neighboring object or any person, because it often happens that a person who has such marked inco-ordination as to be in great danger of falling if he attempt to walk with the eyes closed may yet walk with security if he is allowed to barely touch his own finger to the finger of another person.

THE ELECTRIC LIGHT CURRENT IN MEDICINE AND SURGERY.

By WM. SCHEPPEGRELL, A. M., M. D.,

Assistant Surgeon Eye, Ear, Nose and Throat Hospital, New Orleans, La.

[CONCLUDED.]

When a storage battery is to be charged by the Edison current, the battery is placed in the circuit, the current being opened through one or more incandescent lamps. As the current passes through the lamps it must pass through the battery also, in which a portion of the electricity is stored.* The stored electricity is taken from the electricity supplying the lamps, but as the resistance of the storage battery is very small, the brilliancy of their illumination is not materially affected.

As the cost of employing electricity is a not unimportant item for consideration, it would be well to explain the economy of using a storage battery in connection with the Edison current, provided one or more electric lights are needed for other purposes, or an electric motor is used.

The charge for electricity is made for amperes at a certain potential. As, however, the electro-motive force of the Edison current is always maintained at a certain point, we may dispense with this constant factor and consider only the ampères.

We saw by Ohm's law that the strength of current (in ampères) varies inversely as the resistance (in ohms). There-

*To avoid circumlocution we speak of "storing" electricity, although, as already explained, this is not really the case.

fore, if 1.42 amperes pass through a 50 c. p. lamp, which has a resistance of 78 ohms, then 2.82 amperes, or twice as many, must pass through a 100 c. p. lamp in which the resistance is only 39 ohms, or one-half the resistance of the first lamp. As the charge is for amperes, we pay twice as much for the use of a 100 c. p. lamp as for one of 50 c. p. for the same length of time.

When, however, we introduce a storage battery into the circuit we *increase* the resistance, therefore we *reduce* the amperes. As the resistance of the storage battery is small, the reduction in the amperes is inconsiderable. It is seen, however, that such a battery in the circuit can not *increase* the amperes, and, as explained, the charge is always for amperes.

If the Edison current is not required for incandescent lamps, or for other purposes, and the lamps must be used simply to charge the battery, then the cost of charging the battery will depend upon the length of time that the lamps must be employed for this purpose.

Very little attention will keep a storage battery in good condition; care should be taken that the covers of the cells do not become wet or covered with dirt. The covers should be removed once in two weeks, and if it is found that a portion of the solution (electrolyte) has evaporated, sufficient should be added to cover the tops of the plates by one-quarter of an inch. The solution consists of sulphuric acid one part, water nine parts.

The storage battery will be needed for the faradic coil, electro-cautery, drill motor and electro-magnet.

The same arrangement will answer for each of these purposes, the current being regulated for each case by means of the cell selector and wire rheostat.

The storage battery may also be advantageously used for the small illuminators. After the current has been regulated, the circuit is closed by depressing the foot push, as described under the head of electro-cautery.

THE FARADIC CURRENT.

The use of the induced current dates back to 1832, when Faraday discovered that a galvanic current was capable of inducing other currents in wires near, but not in contact with the conductor of the primary galvanic current. These induced

currents are only of momentary duration, being present only when the circuit is closed and when it is opened, the closing causing the *inverse* and the opening the *direct* current.

Induced currents may also be caused by magnets, which is in conformity with Ampère's theory that a magnet is only a form of solenoid, and that each molecule of the magnetic substance is traversed by a closed electric current.

The faradic coil is an arrangement for producing induced currents, which are generated by the action of an electric current, whose circuit is alternately opened and closed. While made in a great variety of forms they all consist essentially of a hollow cylinder in which is a bar of soft iron, or bundle of iron wires, with two spiral coils around it, one, called the primary coil, being connected with the poles of a battery, the circuit of which is alternately opened and closed by a self-acting arrangement; and the other, called a secondary coil, serving to develop the induced current.

The working of the interrupter depends upon the fact that when a current of electricity is passed through a coil of wire around a bar of soft iron, it magnetizes it, but as soon as the current is broken, the iron loses its magnetic properties. When a current is passed through the interrupter, the magnetized iron bar attracts the hammer of the interrupter from the platinum point, by means of which the circuit is closed. As this breaks the contact, the hammer is no longer attracted by the iron bar and falls back against the platinum point, which again closes the circuit; and thus the process continues automatically.

When the circuit is closed, the current passes through the primary coil, which generates the *inverse* induced current in the secondary coil. When the circuit is opened, the *direct* current passes through the secondary coil. Inverse and direct refer to the direction of the current, the direct being in the same direction as the primary (galvanic) current, and the inverse in the opposite direction.

The potential of the induced current is much higher than that of the current which generated it. The direct induced current is of short duration but of high potential. The inverse current is of longer duration, but of lower potential.

The strength of the induced current depends not only on the strength of the primary (inducing) current, but more especially on the length of the secondary coil and the size of the iron core. By the increase in size of the latter two, a mild galvanic current may be enabled to generate a most powerful induced current.

The strength of the induced current is lowered by withdrawing the iron core, and in some faradic coils, also by withdrawing the secondary coil.

The faradic coil, as usually made, furnishes two currents, the secondary and the primary. This "primary" current is an *induced* current and must not be confounded with the primary galvanic current which generates the induced currents. In the first place the primary galvanic current used for the faradic coil is of such low potential that it could not be felt, and in the second place, the primary induced current is felt strongest when the circuit is opened—that is, when the primary galvanic is not in operation. It is the current generated in the primary coil by the induction of the turns of the wire of the coil itself; and, to some extent, by the reaction of the secondary coil upon it.

As the wire of the primary coil, through which the galvanic current passes is short and thick, its resistance is very low, and the potential of the galvanic current should be correspondingly low. The current from one storage cell (2 volts) will give a current of sufficient strength for most faradic coils, and if a current from more cells is used, it should be regulated by the wire rheostat. The effects of a stronger current can, of course, be counteracted by withdrawing the iron core or secondary coil, but it is wasteful of the current and injurious to the platinum point of the interrupter.

The faradic coil may also be operated directly from the mains of the Edison current. For this purpose the current is first passed through a lamp of say 100 c. p. This gives the requisite number of amperes, but each time the current is interrupted a current of high potential is broken, which would rapidly burn out the platinum point of the rheotome. To protect the coil from this effect, a shunt is passed around it of a little higher resistance than the primary coil. When the cur-

rent is broken so that it can not pass through the coil, it passes through the shunt, and the sparking at the interrupter is avoided.

While this method of operating the faradic coil is perfectly feasible, it is neither as economical nor as safe as the method of employing the storage battery.

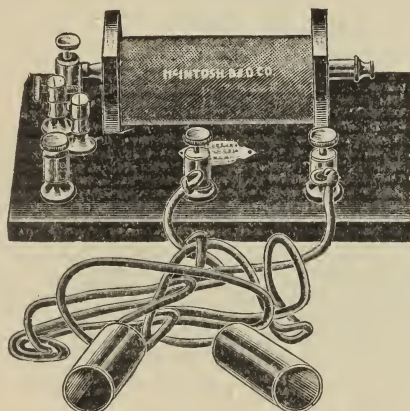


Fig. 34. Simple Faradic Coil.

There are a large number of faradic coils in use, most of which are less effective. Fig. 34 shows a simple form of faradic coil.

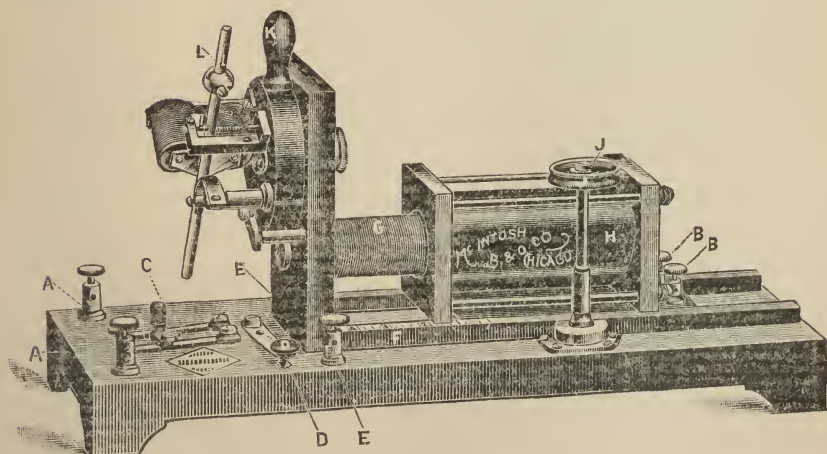


Fig. 35. Tripiet Induction Apparatus.

One of the latest improvements in faradic coils is shown in Fig. 35. It is provided with a mechanism by means of which

a variation of from 50 to 3000 interruptions per minute may be effected. By means of a rack and pinion J, the secondary coil is moved backward and forward over the primary. C is a pole-changer for reversing the current, and D is a contact button for stopping the current.

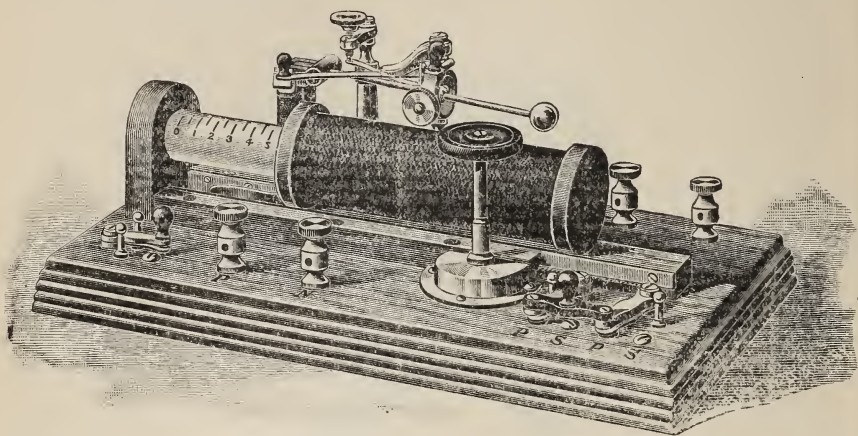


Fig. 36. Dubois-Raymond (Faradic) Coil.

Another excellent instrument is the Dubois-Raymond coil shown in Fig. 36. It is provided with a slow and a rapid current interrupter, a polarity changer, a calibrated scale by which the currents may be accurately registered, and a rack and pinion by which the currents may be graduated. This faradic coil gives excellent results.

A very effective method of producing the slow and rapid interruptions for the faradic coil is by means of a fan-motor or other motor, to which a commutator is attached, as explained when describing the interrupted galvanic current. When this method is used the platinum point of the interrupter of the coil is screwed up fast, so as to prevent any interruptions at this point.

The interruptions are then made by means of the commutator, through which the primary current is passed. The rate of the interruptions is regulated by the speed of the motor.

Instead of adjusting the strength of the secondary current by means of the iron core or secondary coil, it may also be done by means of a water rheostat. The faradic coil is then allowed to produce a full induced current, which is regulated

for the patient by means of the water rheostat, through which the induced current is allowed to pass.

The electrodes used with the faradic current are similar to those described under the head of galvanism.

ELECTRO-CAUTERY.

In the electro-cautery, the energy of electricity is utilized for heating a platinum wire, whose form is adapted to the purpose for which it is used. The great advantage of the electro-cautery lies in the fact that it may be carefully and accurately placed in position while cold, and heated or allowed to cool under the perfect control of the operator.

For the electro-cautery we require a current of large quantity (ampères), but of low potential (volts), as the resistance in the circuit is exceedingly small. The principal resistance in the circuit lies in the platinum wire, which is usually flattened to offer a still greater resistance. At this point the electrical energy is transformed into heat, and the platinum knife becomes heated in proportion to its resistance and to the strength of current used.

If a current of insufficient strength is used, or the resistance in the platinum wire is too low, the cautery will not be sufficiently heated. If a current too strong in proportion to the resistance is used, the platinum may become fused, thus breaking the circuit. The strength of the current is regulated by a wire rheostat, and also when a storage battery of several cells is used by means of the cell-selector (Fig. 33).

The storage battery offers special facilities for the use of the electro-cautery, as it furnishes a supply of electricity large in quantity and of low potential. Its employment has contributed much to encourage the use of the electro-cautery, as it allows us to dispense with the cautery batteries and their attending inconveniences. For small and medium-sized cauteries a storage battery of two cells is sufficient, but three or four cells are needed for the larger cauteries.

The wires and binding cords (Fig. 32) between the battery and cautery handle should be heavy, so as to throw as little resistance as possible into the circuit.

After adjusting the current by the rheostat, the current should be closed by means of a floor-push, and not by an inter-

rupter in the cautery handle. The latter is objectionable because it occasions a sparking at the point of contact in the handle, and besides requires the use of a finger, which is inconvenient, as all the fingers are needed to manipulate the instrument.

Fig. 46 shows a floor push in connection with a nasal motor. A convenient and simple floor-switch is shown in Fig. 37.

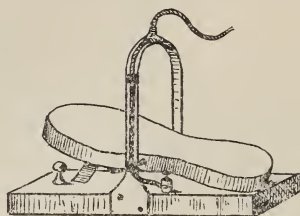


Fig. 37. Foot Switch.

It consists of two pieces of board, as shown in the figure, the upper piece being balanced on a pivot attached to the upright band arising from the base board. A spring, adjusted between the two boards, in advance of the median line, presses the heel end of the foot piece to the base board. The contacts are placed near the front so that when the foot, which rests comfortably on the upper board is depressed, the contacts are brought together and the circuit closed.

As the cautery electrodes require large quantities of electricity of low voltage, it is important to decrease the resistance in the circuit as much as possible. With this end in view the

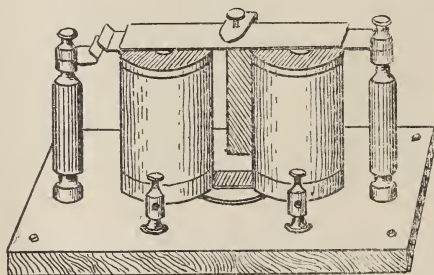


Fig. 39. Magnetic Circuit Closer.

writer uses a magnetic circuit closer, shown in Fig. 39. By means of this instrument we are enabled to close the main circuit, without the necessity of having the current pass through the foot-switch and the wires which lead to it.

The essential part of the apparatus is a double coil of insulated wire, each coil enclosing a bar of soft iron. The coils are so wound that a current of four volts will draw down the armature with considerable force. There are two uprights of nickel-plated copper, one of which supports the armature, as shown in the figure. The armature is so arranged that it presses upward and rests against the adjusting screw above it. When the armature is drawn down, it closes the circuit by bringing together the contacts near the second upright. The connections may be made either to the upper end of the uprights and binding posts or, preferably, to the lower end of these, as the wires may thus be concealed.

Two of the storage cells, which are used for the cautery current, may, at the same time, be used to operate the circuit closer, being connected with the coils and with the foot-switch. The cautery current, from all the cells, is carried to the uprights.

When the foot-switch is closed by depressing the foot, the current passes through the coils and magnetizes the iron cores. The armature above is immediately attracted, and, pressing downward, closes the cautery current by bringing together the contacts between the two uprights.

The circuit described for the faradic coil is used, the cell-selector throwing the requisite number of cells into the circuit, and the wire rheostat adjusting the current so that the cautery knives are brought to the proper degree of heat. The cauteries are then heated by depressing the foot-switch, and cooled by allowing it to rise.

Fig. 40 represents a small cautery handle and Fig. 41 a

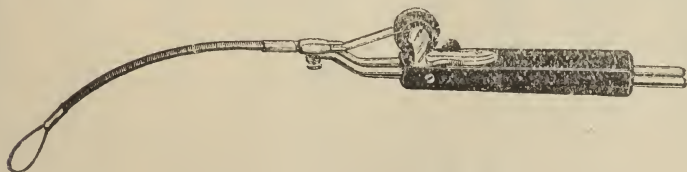


Fig. 40. Small Knife Handle.

heavy handle. A cautery handle, with wheel attachment for tightening the platinum loop, is shown in Fig. 42. A cautery handle should be held like a pen, so as to allow of delicate manipulations. When used in cavities, as the nose and throat,

the parts to be cauterized should be thoroughly illuminated, so that the process can be distinctly observed by the operator.



Fig. 41. Galvano-Cautery Handle.

Electro-cauteries are made of a large variety of forms, being adapted to the various uses for which they may be needed. A number of these cauteries are shown in Figs. 43 and 44.



Fig. 42. Cautery Handle with Wheel Attachment.

The cauteries should occasionally be examined to see that the copper wires are properly insulated, and that the metals do not touch in any part of their course, as this would short circuit the current at the point of contact, and prevent the heating of the platinum wire. When a cautery is too heavy for the

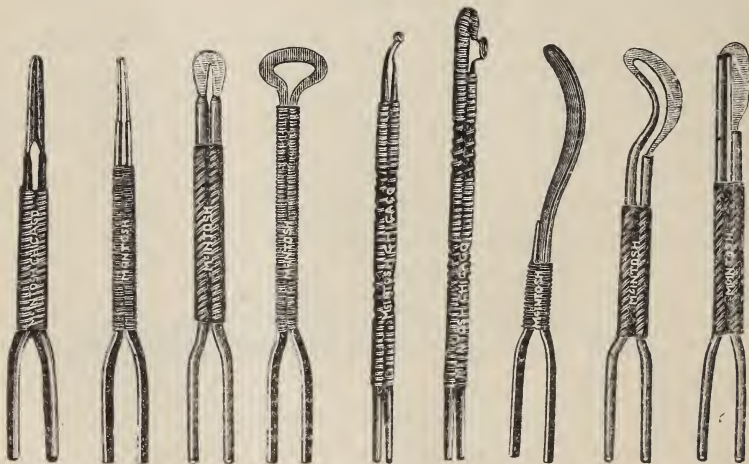


Fig. 43.

capacity of a storage battery the resistance may be increased by flattening the platinum wire, when it will become heated by a lighter current.

After a cautery has been used, it should be cleansed of organic matter, washed in an antiseptic solution and dried. Before being again used it should be heated to a dull red for a

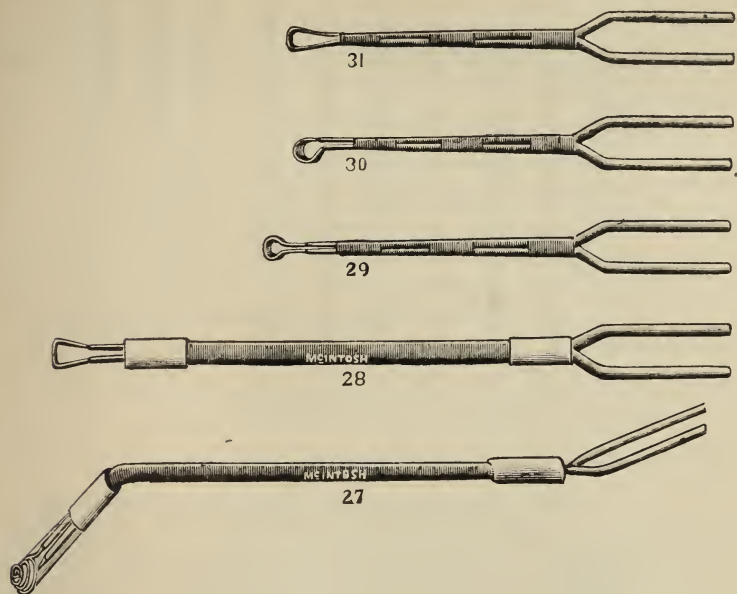


Fig. 44.

moment, which will thoroughly disinfect it. The method, sometimes adopted, of burning off the organic matter by heating the knife, is efficacious only as far as the platinum point is concerned, and the high temperature needed for this very soon destroys the usefulness of the cautery.

For heating the platinum snare the current is arranged as for the electro-cautery, a handle of special design (Fig. 42) being needed for tightening the snare. After adjusting the current as for the cauteries, the loop is heated by depressing the foot-push, and the loop tightening by means of the wheel of the handle. As the platinum snare, when heated, is easily torn apart, it should be used with care.

THE ELECTRIC DRILL MOTOR.

The electric drill motor, besides its use in dental surgery, is much used in operations for correcting deformities of the septum of the nose, drilling through the alveolar process into the antrum of Highmore, etc.

For the drill motor the circuit is arranged as for the cautery. The current is regulated by the cell selector and wire

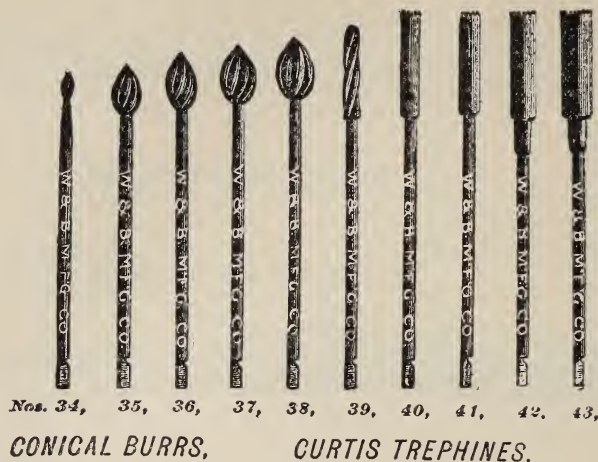


Fig. 45.

rheostat, the current being completed by depressing the floor-push, as for the electro-cautery.

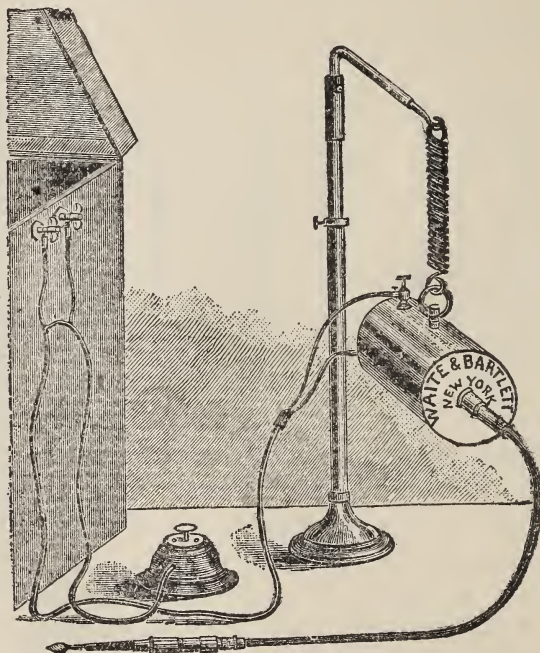


FIG. 46. Nasal Motor with flexible shaft and hand piece, stand and floor-push.

For light operations two storage cells will give a sufficiently strong current, but for heavier work three or four cells will be needed.

Fig. 46 represents a nasal motor with flexible shaft and hand piece, stand and floor-push. Fig. 45 shows a number of burrs and trephines, which are used in connection with the drill motor.

When the current is broken the drill motor continues to operate the burrs for some seconds, the revolutions being continued by its own momentum. To remedy this an automatic brake may be attached to the motor, which will stop the revolutions instantly when the circuit is opened.

THE ELECTRO-MAGNET.

The electro-magnet for removing particles of iron and steel from the cornea and chambers of the eye is shown in Fig. 47. It consists of a core of soft iron around which is



Fig. 47. Electro-Magnet.

wound a thick coil of insulated wire. When a current of electricity is passed through the wire of the coil, the iron becomes a magnet of considerable strength. The instrument is provided with points of various forms and sizes.

As in the faradic coil, the resistance here is small, and we require a current of low potential but of large volume, such as is furnished by the storage battery.

The same arrangement of the circuit as used for the faradic coil, electro-cautery and drill motor is used for the electro-magnet. The point of the instrument is introduced as near as possible to the iron or steel particle in the eye, then the floor push being depressed the magnetic properties of the instrument are developed and the particle, attracted by the point, may be removed.

PLANT FOR USING THE EDISON CURRENT IN MEDICINE AND SURGERY.

The plant used by the writer for employing the Edison current in medicine and surgery is shown in Fig. 48. It contains facilities for using electricity for illumination, the galvanic cur-

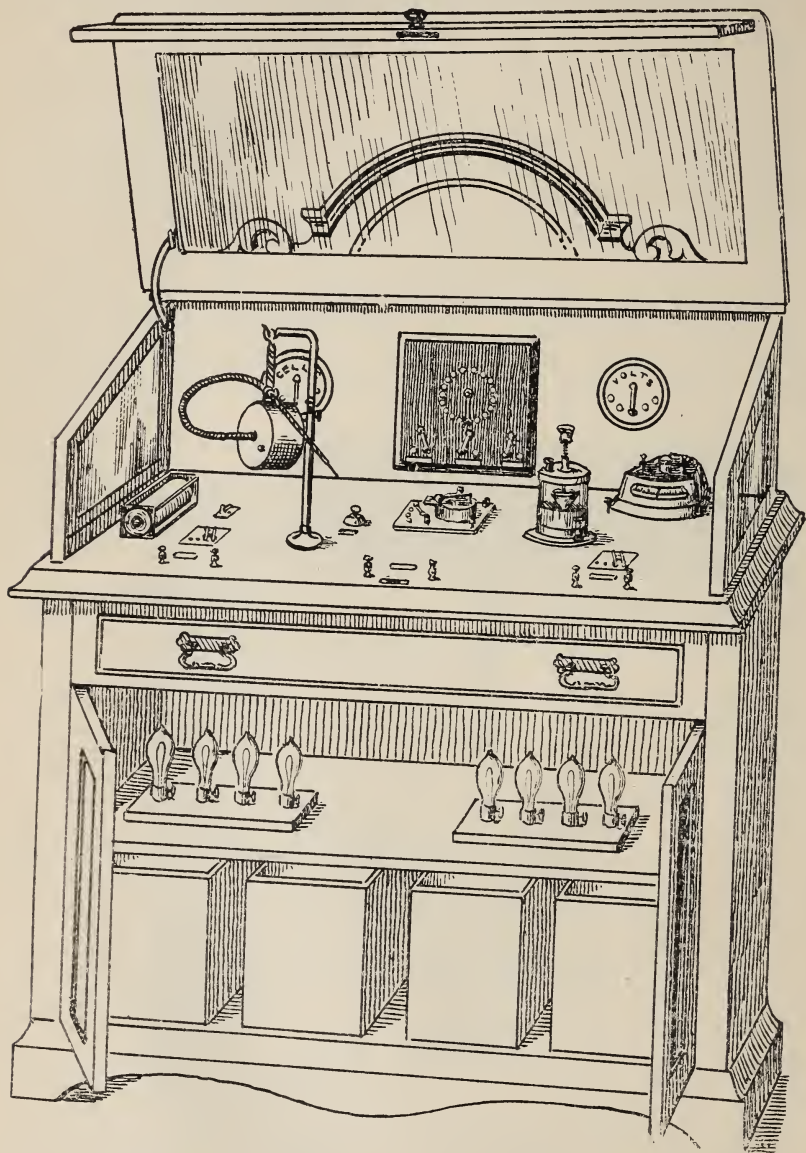


Fig. 48. Dr. Scheppegrell's Plant for using the Edison Current in Medicine and Surgery.

rent, electrolysis, cataphoresis, the faradic currents, electro-cautery, the drill motor and the electro-magnet.

The general arrangement of the plant will be understood by referring to the foregoing pages. The parts are as follows:

The form of the cabinet and the hinged glass cover will be understood by referring to the cut. On the lower shelf of the cabinet are four storage cells, the current for which is controlled by the cell selector to the left of the figure, and by the rheostat in the centre (Fig. 48).

On the second shelf, to the left, are four lamps in *multiple arc* connected by means of a switch to the central pair of binding posts. By means of these lamps, a variable resistance may be used for illuminators attached to the central pair of binding posts. By a different movement of the switch, the storage battery may be connected with the same binding posts, so that the current from the storage battery may be used for the illuminators. From the same binding posts, by means of other switches, a current may be taken from the storage battery for the electro-cautery and the electro-magnet.

By means of the switches connected with the rheostat, the current from the storage battery may be used for the drill motor, or the faradic coil. By means of a plug switch, either the primary or secondary induced current may be carried to the binding posts to the left, from which the faradic current is taken.

On the second shelf of the cabinet to the right are four lamps, forming the shunt for the galvanic current. From these, connections are made with the volt selector to the right of the figure.

The cabinet is supplied with milliampèremeter, water rheostat and automatic rheotome, which are connected with the binding posts to the right, from which are taken the currents for galvanism, electrolysis and cataphoresis. There are two pole changers, one for the galvanic and the other for the faradic current.

The Edison current is connected with the storage cells, the resistance lamps and the shunt of the volt selector.

The cabinet contains a drawer for electrodes, binding cords, cauteries, etc.

Citizens' Bank Building.

PERMANGANATE OF POTASH IN THE TREATMENT OF
ERYSIPELAS.

BY W. W. BOULDIN, M. D., CHAPEL HILL, TEXAS.

Noticing of late in the medical journals many articles recommending many different treatments in erysipelas, thus evidencing the fact that there is no recognized specific mode of treating this specific inflammation, I wish to place before the profession, for confirmation of its value, the treatment pursued with success in three cases.

I am aware that the treatment of such a limited number of cases, however successful the results, can not establish its value as a treatment for erysipelas, but the beneficial effect being manifested so distinctly and quickly after the inauguration of this medication, I could not but think that there was a direct influence exerted over the disease.

Case 1 began idiopathically upon the leg, over a surface 2 x 4 inches. This case was under the charge of my associate in practice, Dr. P. M. Raysor, by whom it had received constitutional treatment, consisting of calomel, followed by citrate of magnesia, producing free evacuation of the bowels, and large doses (mxxx) of tincture of chloride of iron.

Local treatment consisted of the application continuously of camphorated phenol (saturated solution) two parts and castor oil one part.

This treatment was continued for four days, the inflammation rapidly spreading, at this time involving the whole surface of the limb from the ankle to two inches above the knee. The severity of the symptoms kept equal pace with the extension of the inflammation, the temperature registering 103 deg. to 104 deg. F.

Upon the suggestion of the writer, local applications of a 15 per cent. aqueous solution of permanganate of potassium was begun, still continuing the constitutional treatment.

The beneficial effects were the more noticeable and distinct in this case on account of its having been treated for four days without any diminution in the severity of the symptoms, but, on the contrary, the inflammation was still spreading and the temperature reaching to 103-104 deg. F.

The application of the permanganate of potassium was made by enveloping the affected portion of the limb in cotton batting saturated with a 15 per cent. aqueous solution. This was allowed to remain about fifteen minutes. This mode of application producing some pain (perhaps from the exclusion of the air and the too concentrated solution), it was not used a second time in this case and not at all in the remaining cases.

Where the solution had thoroughly come in contact with the skin the inflammation had been subdued, but where the contact was imperfect the inflammation had not abated so perceptibly and necessitated the painting in of the solution, after which it entirely faded. In less than twenty-four hours after the first application of the permanganate solution the swelling was greatly diminished and the temperature almost normal. Even from the first application the beneficial effect was noticeable.

Case 2 occurred in a child of four years. Without seeing the child, but from a description of the case by the parents, I (supposing it to be a case of malarial fever and the redness and swelling of the limb from no specific cause) prescribed a mercurial purge and quinine, and for the inflamed leg a 10 per cent. aristol ointment.

On the following day, the child being no better, I was called to see it. It then was seen to be a case of cutaneous erysipelas, the inflammation of the leg beginning at the site of an abrasion of the skin caused by the bite of a tick.

The quinine was continued and syrup of chloride of iron (Weld's) was added to the internal treatment. A 5 per cent. solution of permanganate of potassium was painted on three times daily, and after it had dried the aristol ointment was applied.

After about three applications the inflammation was subdued, the swelling greatly diminished and the temperature normal.

Case 3 was contracted from case 2. The inflammation began at an abrasion of the skin near the outer angle of the right eye, and perhaps was caused by a scratch with the fingernail. When the case was first seen the inflammation occupied almost the whole right side of the face, and had extended to

the ear and upon the scalp. The swelling was very great, the right eye being entirely closed. The same treatment as in case 2 was pursued, and with a like result after about three applications.

In the phlegmonous and cellular varieties of erysipelas, if results were not gotten from the painting on of a 5 to 15 per cent. solution of permanganate of potassium, it would be advisable to inject the same solution hypodermically about the margin and in different parts of the inflamed area, that the germicide might come in contact with the causative agent. In the two latter varieties it might be advisable to make incisions through the skin, and then apply freely the permanganate solution.

The *modus operandi* of the permanganate of potassium seems to be the local germicidal action exerted upon the causative agent at the site of inflammation. If local treatment be begun sufficiently early, before the absorption of the products of germ life, I believe there will be little need of constitutional treatment. If the staining of the skin with the permanganate solution be objectionable the latter may be decolorized by a solution of oxalic acid.

Proceedings of Societies.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON ORTHOPEDIC SURGERY.

Stated meeting January 20, 1893. Henry Ling Taylor, M. D., chairman.

REFLEX SPASM ON "POINT PRESSURE."

Dr. R. H. Sayre presented a boy with congenital infantile spastic paralysis, in order to illustrate what he understood by contracted tissues and by reflex spasm on "point pressure." This child had been seen by a number of gentlemen who had stated that nothing could be done to relieve his condition, yet the speaker was of the opinion that by proper treatment

the child's condition could be improved sufficiently to enable him to walk without mechanical aid. He then demonstrated the existence of spasm when "point pressure" was made on the contracted tendo Achillis. In his experience, the condition of such a tendon was only made worse by stretching, yet tenotomy and the subsequent use of massage, galvanism and faradism will cause a decided improvement. He had seen cases in which spastically contracted muscles could be elongated sufficiently to allow of placing the parts in the normal position without producing reflex spasm, and in such, of course, tenotomy is not required. Thus, in a boy twelve years of age, who had been for a long time utterly helpless, he was able, by carrying out this line of treatment, to improve his condition materially, so that the boy could walk about the room now and clothe and feed himself. He was not prepared to state just how tenotomy affected the condition of those muscles in which this reflex spasm was elicited, but it served to place the nervous system in such a condition that the patients were better able to co-ordinate, not only these muscles, but other muscles in the body.

The chairman said that in previous discussions on this subject, he had not noticed any distinction between cerebral and other palsies. In the case presented, the spasm elicited on point pressure might be one manifestation of the heightened reflex activity present in cerebral paralyses. Such deformities could often be temporarily overcome by stretching, but most orthopedic surgeons were agreed that most cases required tenotomy for their permanent cure.

Dr. R. H. Sayre replied that it was not claimed that this sign would enable one to differentiate between infantile spastic paralysis and anterior poliomyelitis, but as a result of observations on cases which had been stretched for periods varying from six months to three years without success, his father had found these cases invariably showed reflex spasm on "point pressure" when the tendons were placed on the stretch, and he claimed that all such shortened tendons, whether as a result of spastic paralysis or of spinal paralysis, could only be permanently benefited by *division* of the tendon.

POTT'S PARAPLEGIA.

This was the subject of a paper read by Dr. R. H. Sayre.

DISCUSSION.

Dr. H. W. Berg said that the value of Dr. Sayre's paper consisted in the aid which it rendered in localizing the lesion of Pott's paraplegia. Some years ago he had himself formu-

lated a theory which he thought would render assistance in the same direction. He divided the cases in which the bladder was involved into two classes, those exhibiting "conscious incontinence" of urine, and those showing "unconscious incontinence" of urine. From the existence of two opposing sets of muscles in the bladder—the detrusor and the sphincter—he argued the probable existence in the bladder or rectal centre of a separate set of motor cells for each of these sets of muscles. In order to be conscious that the bladder is becoming filled with urine, the sensory nerves of the bladder must carry this information up to the brain; hence, in addition to the reflex act of the centre itself, there is a voluntary control over all these muscles exerted by the brain through these centres. Now, a lesion may paralyze either the motor cells or the sensory cells of the centre; in the former case there is a conscious incontinence, and in the latter unconscious incontinence. Again, any lesion involving the set of fibres passing from the sensory portion of the centre through the posterior portions of the cord to the brain will be followed by unconscious incontinence of urine, while any lesion pressing upon the anterior or lateral portions of the cord will cause conscious incontinence of urine.

Dr. Royal Whitman said that the distinction made by Dr. Berg, as showing the existence of pressure at one or another part of the cord, could be of but little practical importance, as the pressure to be removed by operation was almost always on the anterior aspect—an extension of the disease from the bodies of the vertebræ. It was also to be remembered that simple pressure was not the only element in the paralysis, for in many cases there was but little actual pressure, but rather an implication of the coverings of the cord in the extension of the tuberculous disease, causing, by interference with the circulation in blood vessels and lymphatics, nutritive changes and subsequent degeneration.

In certain cases, paralysis was a very transitory complication; in others, it was never or only partially recovered from. This difference might be explained in the one instance by simple pressure, in another by the more serious implication of the coverings of the cord with nutritive changes, or by inflammation and destruction of the elements by the tuberculous process. In considering operative interference, it would be important, if it were possible, to make out more accurately the extent of the disease, and the actual condition of the cord itself, as certain advanced cases must be hopeless from any point of view, while simple pressure, as for example from abscess, as in the case mentioned by Dr. Myers, might be relieved by operation at an

early period, with good result. Although recovery from the paralysis of Pott's disease might be confidently predicted in the great majority of cases, under conservative treatment, this recovery was not always perfect. A certain amount of weakness and spastic rigidity might persist indefinitely. He could recall the case of a girl, now fourteen years of age, who had recovered from seven distinct attacks. She was now, two years after the last recovery, walking about, although there was still well marked spastic contraction of the legs. Her condition was, however, gradually improving.

Dr. Frederick Peterson said that the neurologist looked upon the paraplegia of Pott's disease as the most favorable of all organic spinal disorders, as a very large percentage recovered. It was very curious that cases which presented the marked symptoms ordinarily considered to be due to secondary degeneration in the cord should, after the lapse of a year, recover entirely under conservative treatment. He agreed with Dr. Sayre that operative treatment should be only a last resort. He had been particularly interested in the cases reported by Dr. Shaffer, in which there had been a cessation of menstruation. It is well known that there is in all probability a parturition and a menstruation reflex centre in the lumbar region of the cord, but the process by which the cessation of menstruation was produced in these cases is rather difficult to explain. Regarding the relative value of motor and sensory symptoms in determining the prognosis, he said that the paraplegia is due to compression or an inflammatory process, or to a combination of the two, and that where the sensory symptoms are marked the prognosis is not so good. This is because the motor functions being represented probably nearer the periphery of the spinal cord, they are the first to suffer when the Pott's disease is mild in character. When the compression becomes very great, then the sensory symptoms develop. Hence, the sensory symptoms are an important index of the extent of the lesion, and of great value in assisting us in making a prognosis.

Dr. Samuel Lloyd said that Lauenstein's rule, to which reference had been made in Dr. Myers' paper, was formulated for fractures of the spine, and was never intended to apply to Pott's disease. In the former class of cases the rule undoubtedly was valuable, but it had been conclusively proven by a study of the cases of Pott's paraplegia which he had published in October that it was inapplicable to this latter class. In Pott's paraplegia it has been demonstrated clinically that incontinence may be present for a considerable period, and yet decided improvement would follow conservative treatment. It

was stated in the paper that shock was one of the causes of incontinence. This is undoubtedly true, but shock in Pott's disease can only occur when the disease has advanced so far that there is a sudden dislocation, or where there is a rupture of an abscess into the spinal canal; shock such as this would hardly produce a lasting incontinence unless some permanent compression was caused by the accident. This had been shown in the cases of fracture of the spine which he had tabulated about a year ago, where it was proven that the cord recovered promptly and progressively from shock unaccompanied by any laceration or compression of the cord.

Regarding the overflow incontinence and the incontinence of the empty bladder, the speaker said that it was pretty well established that in cases of irritation of the cord where cerebral control is still present the reflexes are increased, and this may easily lead to increased sphincteric action, and in that way to overflow. This would indicate the early stages of cord interference and the fact that the pressure was as yet very slight and not sufficient to shut off the cerebral control. On the other hand, where there is complete suppression of urine, with paraplegia and anæsthesia, the indication is that the pressure has become so extensive as to abolish cerebral control, and hence the reflexes also. He thought all could assent to the statement made by Dr. Sayre, that it was only in very exceptional cases that operation is indicated. Chipault, who has carefully reviewed this subject, comes to the same conclusion, and emphasizes the importance of constant mechanical treatment after operation, a point which has been very generally neglected. The large number of deaths recorded in the table which the speaker had himself published could be explained by the fact that many of those operated upon were cases in which there was degeneration of the cord—in other words, cases now considered unfit for operation.

Dr. Joseph Collins referred to a case of extensive meningo-myelitis with descending degeneration of the anterior and crossed pyramidal tracts, in which operation had been done, and very properly, for there was no reason for supposing in this case that the cord could be regenerated when the degeneration was so extensive. The patient died of septic pneumonia a few days later. Many neurologists to-day do not believe that there is any such thing as acute transverse myelitis, cases formerly going under this head being considered as really instances of pressure myelitis. The first lesion is a meningo-myelitis, and not a simple anæmia of the cord. Indeed, the fact that the vessels of the spinal cord, 150 to 200 in number, are so small as to be nearly invisible to the

naked eye, makes it highly improbable that anæmia could possibly cause the symptoms found in the early stage of Pott's paraplegia. The speaker endorsed what had been said about the inadvisability in most cases of resorting to operation. He thought it absurd to suppose that ergot or ergotine could cause sufficient contraction of these minute blood vessels to sensibly overcome the hyperæmia. If these preparations have any action at all on the blood vessels, it is to interfere with their nutrition, and hence with the regeneration of the affected fibres, and are, therefore, to be avoided. He wished to protest, therefore, against this very common method of treatment. Dr. Berg's theory, a modification of that presented by Gowers, was, in his opinion, unnecessarily elaborate. We know that in the lumbar cord there is a centre for the preservation of the tonus of the muscles in the lower extremity, which exerts a similar action on the bladder. There is also a centre for urination. In his recent paper on myelitis there was cited cases of acute ascending paralysis with lesions of the posterior columns, and yet the bladder remained unaffected. In connection with the cases narrated by Dr. Shaffer it was well to remember that it is claimed there is a menstruation centre situated opposite the eleventh or twelfth dorsal vertebra.

Dr. S. Ketch referred to the case of a boy who had been under observation for over five years, and who had had paraplegia during the greater part of this time. Up to last summer it was complete as regards the motor symptoms, yet there had never been any urinary or rectal incontinence. He had been under strict mechanical treatment all the time, and last summer he had improved sufficiently to walk a little. At present the reflexes are still exaggerated, and there is slight ankle clonus. Orthopedists in general hold the opinion that operative interference should be a last resort in these cases, and the propriety of this view was well shown in his case, which he was sure would long ago have been subjected to operation by the advocates of laminectomy.

Dr. Berg said that in his remarks on the two forms of incontinence he had not stated that such cells as he described actually existed, but the symptoms observed were more easily explicable on such a theory. He would like to ask Dr. Sayre how often he had seen paraplegia before the development of the kyphos.

Dr. Anna M. Galbraith said that she had had one case of incontinence, due to inactivity of the lumbar centres, of four years' duration, which finally under suitable treatment terminated in complete recovery. Where electricity did harm

there was probably an acute inflammation, which is always a contra-indication to the use of electricity.

The chairman said that Dr. Lovett and himself, in a paper which they had published in 1886, were among the first to call attention to the comparative benignity of Pott's paraplegia under proper mechanical treatment.

Dr. Myers, in closing the discussion on his paper, said his cases showed that the connecting fibres between the brain and the reflex centres could resist pressure severe enough to practically abolish their function for a long time. He had had a recovery from a paralysis of the bladder and rectum of four and a half months' duration, under conservative treatment, and had notes on two such cases cured by laminectomy after six months, and another history read as if the cure was gained after eighteen months.

The highly organized reflex centres themselves were only once affected, although most severe cases of dorso-lumbar disease were seen. The peripheral segment of the reflex arc had not been interrupted in any of his cases.

Unfortunately, too few cases had been carefully reported to enable him to establish the prognostic value of the different varieties of this paralysis. He had never seen paralysis of the bladder and rectum without motor paraplegia, though it was not uncommon without note being made of sensory symptoms; therefore, he thought, in the latter cases, the distinction of unconscious and conscious incontinence might be of value as indicating involvement or not of the posterior part of the cord.

In reference to Dr. Sayre's paper he wished to mention a recent autopsy, where the cord was found compressed at the second dorsal by an extra-dural abscess, a thickened dura, and from being tightly drawn over the projecting bony angle anteriorly. Had laminectomy been done in this case, not only would this pressure not have been relieved, but there would have been a complete solution of bony continuity here, because the body of the second dorsal was entirely destroyed, and the pedicle and laminae were also affected. Rupture of the cord could not have then been prevented. Weakening the spine had been indefinitely referred to often, but this case showed it was a real danger, and one which could not always be anticipated, as externally this case did not seem a very severe one.

Dr. R. H. Sayre, in closing the discussion, referred to the anatomical structure of the spine and the difficulty of relieving the pressure by operation without removing to a dangerous extent the supports of the spinal column, and said that such measures were of very questionable utility except where it is known to be in the posterior part of the spine. Massage is a

very indefinite term, and as often administered will only do harm; yet moderate stretching and gentle manipulation were beneficial in certain cases. The diversity of opinion regarding the utility of electricity is explained by the fact that here a large part of our treatment is empirical, whether mechanical, medicinal or operative. He had seen patients improve under galvanism, and become worse when this was intermitted. In cases of Pott's disease, where there was disturbed heart action and a marked involvement of the sympathetic, decided benefit had followed galvanization of the sympathetic. In two of the cases reported the paraplegia had existed for a number of months before the kyphos was discovered, and in a third the appearance of the kyphos was preceded by a partial paresis of one leg. He did not see why ergot should not contract small vessels as well as large ones. Clinically, it had seemed to him to do good, and he had supposed its beneficial action was to be attributed to a diminution in the supply of blood to the cord.

CLINICAL SOCIETY OF MARYLAND.

BALTIMORE, January 6, 1893.

The 274th regular meeting was called to order by the president, Dr. Wm. E. Moseley.

Drs. Richard F. Gundry, of Catonsville, Delano Ames and J. D. Farrar, of Baltimore, were elected to membership.

Dr. N. G. Keirle exhibited a rabbit into which he had inserted the virus of rabies. On the 27th of November a Baltimore policeman was severely bitten on the hand and in the thigh by a dog that attacked him. The dog was subsequently killed, and the policeman underwent a course of treatment at the Pasteur Institute in New York. A post mortem was made on the dog on the night of the 27th. The cord was removed and sent to the Johns Hopkins Hospital, where Dr. Nuttall, the next day, inoculated two rabbits. Dr. Keirle then took the cord to his laboratory in the College of Physicians and Surgeons, where he trephined a rabbit and inserted portions of the cord. On the fifteenth day thereafter the rabbit was sick. It had a very characteristic feature—namely, the gritting of the teeth. The next day it was very sick and lay upon its side, which is not natural with these animals, as they squat. It subsequently began to develop convulsions and the temperature dropped very low.

The rabbit died on the 27th of December and its spinal cord was used to inoculate the rabbit exhibited before the society. The rabbit was trephined and a portion of the cord

not larger than the smallest shot was put under the dura. It is now twenty days since the inoculation. There appears to be not much the matter with the animal, but it has grinding and gritting of the teeth, with occasional tremors over the face amounting at times to slight convulsions. Dr. Keirle believed that in another day it would be much worse and in two or three days it would be dead. Further developments will be reported to the society.

The appointed subject for the evening was

ANÆSTHESIA (CHLOROFORM VS. ETHER).

Dr. L. McLane Tiffany objected to the phrase "chloroform vs. ether." In the use of anæsthetics we are not confined and ought not to be confined to chloroform or ether, neither should the two drugs be placed in opposition; each has its place. We have in nitrous oxide gas a valuable anæsthetic for certain small operations. Dr. Tiffany in such cases meets his patient at the dentist's office, where gas is administered and the operation performed. The opening of an abscess, the releasing of a phimosi, the evulsion of a nail and other minor operations can be done under gas.

The respiratory organs and the kidneys are the two organs which are more concerned in the choice between ether and chloroform than any other. Dr. Tiffany prefers not to give ether when there is any tendency to pulmonary congestion. He gives chloroform in young children and plethoric people on account of their tendency to bronchitis when ether is given. In phthisis he prefers chloroform. In pleuritic effusions he uses either anæsthetic. In aged people and in people of flabby fibre he prefers chloroform.

We are generally led to believe by the literature of the day that ether is not to be given in case of kidney disease. Dr. Tiffany knows of no certain evidence bearing upon this fact. He has operated several times in extrophy of the bladder in which the ureters were exposed, using ether as an anæsthetic. He has never failed to see the urine flowing during the operation in undiminished amount. In operations upon the kidney he has in every case used ether and has seen no evil result. In a large number of railway accidents there will be found albumen in the urine, and Dr. Tiffany has never seen any bad results from the use of ether in such cases.

There are certain cases where ether, while perhaps better than chloroform, should be given with extreme circumspection. These are cases of injury where the patient has reacted and has come out of the shock due to the injury and is then submitted to the surgeon's knife. In these cases, if the operation

is long continued, the patient is apt to die in a certain number of hours afterward. Ether should be given in minimum amount in these cases and the operation done with extreme rapidity. A careful, methodical operation under ether is very often followed by the death of the patient. He has given chloroform in some of these cases, but has made his patient pretty drunk before giving it. He operates upon a drunken rather than upon an anæsthetized man.

Dr. J. W. Chambers thought that the matter of giving ether or chloroform is largely a matter of habit. We say of a man that he is either a chloroformist or an etherite, according to his habit. Whether it is ether or chloroform it destroys probably all the centres except the respiratory and circulatory centres, and now and then it destroys one of these. It seems not to matter much which we use. The etherite has one advantage over the chloroformist in that his patients die from pneumonia or suppression of urine, while the chloroformist's patients die on the table from shock, hæmorrhage or chloroform.

Old people, young people, people with bronchitis, people with kidney disease, women in obstetrics, etc., should preferably be given chloroform. If you remove these cases from the list of surgical operations you remove the greater number of the operations and this would seem to give the advantage to chloroform. In operations about the neck and head, or in localities where venous hæmorrhage is feared, Dr. Chambers prefers chloroform. Where a patient must be operated upon shortly after a full meal, chloroform is less likely to cause vomiting than is ether.

A case of death coming under Dr. Chambers' observation was that of a lady about 51 years of age to be operated upon for carcinoma of the breast. She was prepared for the operation and chloroform anæsthesia was begun. She had been given a glass of whiskey beforehand. She was asked to take two or three deep breaths; then the cylinder of chloroform was applied. She took one long breath, then a second, and then stopped. Dr. Chambers was then called and found her pulse still beating and pupils contracted. Artificial respiration was tried and respiratory stimulants given, but she never breathed any more notwithstanding that her pulse beat one-half a minute to two minutes afterward. Another case was that of a child of about 12 years of age with hip-joint disease. Her general condition appeared good and her lungs and heart apparently all right. In the midst of the operation, which was in a very few minutes, she stopped breathing. Most men give ether where they think there will be a prolonged operation be-

cause they think it perfectly safe in such cases. A patient should be kept under ether no longer than is necessary to do a reasonably rapid operation. There is danger in the over-deliberation that is constantly practised because the patient is not screaming with pain.

Dr. A. Friedenwald related three cases, one of apparent death from chloroform with recovery, another of death from ether and the third a death from chloroform. The first was a case operated upon for cataract extraction. The patient was about 40 years of age. Local anæsthetics were not then in use and chloroform was given. The operation was begun and the section made when the patient stopped breathing and had no pulse. The usual manœuvres for resuscitation were tried, but without avail, and the man was concluded to be dead. After the lapse of several minutes Dr. Friedenwald in desperation gave the man a terrible thrust in the sides and immediately he began to breathe and his pulse to beat. Both centres in this case appeared to be overcome at once.

The case of death from ether was that of a man about 82 years of age. He had some trouble in his abdomen and a lump was observed in the groin. A surgeon was called in and thought the lump was not a hernia, but he could not be certain unless an incision were made. As the incision could do no harm, and might save life if the trouble was due to hernia, Dr. Friedenwald gave his consent to the operation. Ether was given, the incision made, and the lump found to be a hæmatocele. For about half an hour after the operation everything seemed to be all right, and then breathing became affected. There were symptoms of congestion of the lungs, and the man died in about thirty-six hours.

The third case was that of a girl 14 years of age. She came to the City Hospital six or eight weeks ago with granular ophthalmia and was to be treated by the mechanical method, with the roller forceps. She was given chloroform carefully with a large cylinder. After two or three inspirations there was a certain rigidity of the muscles and a peculiar blueness about the eye and the skin below the lower eyelids. The pulse was gone, but the respiration continued for some time. When the respiration ceased artificial respiration was tried and also other means, and finally the trachea was opened and air blown into the lungs, but without avail.

If the truth were known, considerable of the popularity of ether would be lost. A great many deaths from ether doubtless occur which are never put down to its account, but are charged to some supervening disease, such as congestion of the lungs, pneumonia, etc. If all of these cases could be

collected, perhaps as large a death rate from ether could be shown as that attributed to chloroform.

Dr. J. M. T. Finney spoke of the importance of the manner in which the anæsthetics are given. There is a great unanimity as to how chloroform should be given—that the vapor should be well diluted. As to the administration of ether Dr. Finney thought that not one patient in a dozen who are etherized is etherized properly. The etherizer usually fills the cone with ether, claps it on the patient's face and keeps it there. The patient under these conditions has a spasm of the glottis, will cough, get blue and will do all sorts of things which he will not do if ether is given properly. Dr. Finney prefers a newspaper wrapped up in a towel and formed into a cone with a piece of cotton or sponge in the apex to any of the inhalers in the market. What is wanted is plenty of air and plenty of ether. The patient should go under ether as quickly and as quietly in a majority of cases as under chloroform. At first half a teaspoonful or so of ether should be put in the cone, say every half minute, and the cone put carefully over the patient's nose. By starting in gradually you gain the patient's confidence, and he will do what you tell him. He will soon begin breathing mechanically, and if you tell him to breathe as you do, he will follow mechanically. The most important point of all is the one which is usually disregarded, and that is the keeping of the air passages free from mucus and vomitus. The patient's mouth should be kept open, the head on one side and drawn well forward below the rest of the body, so that the mucus will run out by gravity over the hand of the etherizer. The patient's mouth should be swabbed out very frequently as far down as the fauces. If this point is carefully regarded the deaths from ether will be very much diminished.

As we get more data on the subject the number of contraindications for ether in the way of kidney diseases and lung and heart affections will doubtless diminish. Dr. Finney could not recall a case of suppression of urine after ether. He had used and seen ether used in children with very good results and had seen a death of a child from chloroform and two instances in which children almost died from chloroform.

Dr. Finney at one time used chloroform pretty generally, but his experience has made him an "etherite." He believes that the time is not far distant when the administration of chloroform will not be considered justifiable by the profession except in some selected cases.

Dr. J. D. Blake believed that if we were narrowed down to one or the other anæsthetic that chloroform would be found to give the best results in the long run. He did not agree with

Dr. Finney that chloroform would soon be discarded. He believed with Dr. Finney that there is a great deal in the method of preparing the patient and of giving the anæsthetic. Three or four hours before the operation five or six grains of quinine and one-fourth grain of morphia, if there is a good heart, should be given. If there is any doubt about the character of the heart digitalis should be added to this combination. After this preparation the patient will stand chloroform well and rally from it promptly. It is also advisable, in many cases where you have a weak heart, and especially in railroad injuries, to use stimulants. Having prepared the patient, the next thing is to properly give the anæsthetic. Neither ether nor chloroform should be given in a saturated form from the beginning. Many of the deaths are probably due to the method of administration rather than to the drug. The patient should be allowed to gradually inhale the anæsthetic, and then after the first stage is over you can push to complete anæsthesia. Dr. Blake has never had any fatal results from ether, but he has had at times to stop the operation and look after the respiratory organs of the patient. Sometimes with the struggling it is difficult to keep the mouth gag in and it is hard to open the mouth to clean it out. Death is probably often due to the impurity of the anæsthetic. Very few doctors are perfectly sure that they are using a pure drug. Ether can be tested by a few drops of balsam of copaiba. If it makes a clear solution it is a chemically pure ether, but if cloudy it contains alcohol or water.

Dr. Blake carries both ether and chloroform in his satchel and uses them according to the indications, and not according to habit.

BALTIMORE, January 20, 1893.

Dr. Harry Friedenwald exhibited a case of exophthalmos due to idiopathic hæmorrhage into the orbit. One morning the patient, a robust negro man, arose feeling quite well. After washing he felt a sudden pain in his eye and found the eye protruding and sensitive. The eyeball was not at all injected and the only reason for the exophthalmos that could be assigned was an orbital hæmorrhage. The movements of the eyeball were very much restricted. During the next two days the pain was greatly diminished and the movements were increased. The vision of the affected eye has been greatly impaired since the hæmorrhage. No blood has yet appeared under the conjunctiva. There are a very great number of cases reported of traumatic orbital hæmorrhage with the same symptoms, but there are only a few cases of idiopathic hæmorrhage

on record. The patient's history throws no light upon the cause of the hæmorrhage.

Dr. A. Friedenwald remembered a similar case which he had seen in a colored man some years ago. The protrusion of the eyeball came on very suddenly, and could be ascribed to no other cause than orbital hæmorrhage. These hæmorrhages are by no means innocent, for the pressure which they exert upon the nerve of the eye is very prejudicial and explains the rapid decrease in the patient's sight. In traumatic cases an accumulation of blood in the orbit is usually followed by total atrophy of the optic nerve.

Dr. S. T. Earle exhibited a Langdon Rectal Tube. This tube was introduced by Dr. Langdon, of the Miami Medical College, of Cincinnati, Ohio. It presents many advantages over the tube ordinarily in use. It is five feet in length, being intended to reach from the anus to the cæcum. It is found extremely valuable in rectal alimentation, as the enemata may be carried up all the way into the bowels and is not followed by a desire for a speedy evacuation, as in the case where the nourishment is injected only into the rectum. The enemata by this means comes into contact with a larger absorbing surface. Another advantage of this tube is its resistance. It is a 1-2 inch tube with only a 1-8 inch opening. This prevents the kinking and bending upon itself which is so likely to take place in the ordinary rectal tube. The opening is at the end and not upon the side. This allows of an easy introduction, as, by letting the enemata flow in gradually, the bowel is distended in advance of the tube. In cases of fecal impaction this resistance and direct opening are of very decided advantage. This tube can be made to pass the fecal obstructions and throw the enemata above the obstruction. It is also valuable in the treatment of oxyuris vermicularis. It has been shown by Heller that the habitat of this worm is about the cæcum and not about the rectum, as has been supposed. By this tube our medicaments can be thrown where they will do the most good.

Dr. Robert W. Johnson related

A DOZEN ACCIDENT CASES TREATED BY THE BLOOD-CLOT
METHOD.

Three gun-shot wounds, two compound fractures of the skull, two compound fractures of patella, one compound fracture of tibia, two of compound dislocation of elbow, one punctured wound of knee-joint, one plastic amputation of breast, one strangulated testicle. These cases were all eminently successful. They did not represent all of the series of cases

treated by this method, but only the most successful ones. While the method is not universally successful, still it may be often trusted, and when it fails it does not leave the patient in a much worse position than had it not been tried.

Dr. W. S. Halsted congratulated Dr. Johnson upon his cases and thought they were excellent illustrations of what could be done by the method.

There is a point that is not generally understood when the blood-clot method is spoken of. Scchde, who advocated this method, made use of it to fill up dead spaces in bone to take the place of sponge, decalcified bone, catgut and other foreign materials, and he contradicted the views of Bergman, who thought it was absolutely fatal to good results to allow blood to remain in the wounds. He did not, however, ascribe any beneficial antiseptic effects to the blood-clot. He did not know at that time of the experiments of Nuttall, and of others since Nuttall, which showed that the blood of some animals has the power to destroy germs, such as the typhoid germs, when inoculated with these germs. No one has yet succeeded in killing pyogenic organisms with human blood.

Perhaps the value of the method lies in the fact that we are no longer afraid of blood in a wound and so we do not feel anxious to obliterate dead spaces which are difficult to obliterate, and we do not have to prevent very minute arteries from bleeding. We have learned that blood is not very harmful in a wound, but we have not learned that it is a thing to be desired in a wound.

It is best to have a wound as dry as possible and to close it immediately, provided we can have it dry without constricting tissues with our ligatures and sutures. We have become sure that one of the most important things in technique is to avoid the strangulation of tissue. This is more important than the employment of antiseptics, more important than disinfecting the skin of the patient and perhaps disinfecting our own hands, but not more important than disinfecting the ligatures.

Dr. J. E. Michael said that similar cases to those related by Dr. Johnson had been treated successfully by other methods.

There can be no object in having a blood-clot except where there is a dead space to deal with. Where wounds can be made clean and closely approximated without constricting tissue it seems reasonable to so treat them rather than to introduce an element that may be harmful.

Dr. J. W. Chambers: We have about come to this conclusion, that a blood-clot is probably less injurious to tissue than a drainage tube: that it does very little harm whether it does good or not.

Dr. Randolph Winslow believed that wherever there are dead spaces, such as cavities in bone, which heal with difficulty by the process of granulation and cicatrization, the blood-clot affords a scaffolding by which the process of repairs is very much facilitated. He feels safer in making use of drainage where there are considerable cavities which are liable to be filled with fluids which may decompose, but in small cavities or bone cavities it is frequently desirable to have them filled with blood.

Dr. A. Friedenwald: A blood-clot always forms after the enucleation of an eye. Before the period of antiseptis he always expected copious suppuration to follow enucleation and it never failed. With antiseptis he never has suppuration.

Dr. Johnson said that while the blood-clot will not destroy germs, and he had never intended to give the impression that it would, it will allow us to close up our wounds without too much interference. It is nature's method of filling up dead spaces and is what occurs in subcutaneous wounds and simple fractures. It enables us to do away with the drainage tube to a great extent and this is an extremely valuable addition to surgery. It makes each operation simpler. In endeavoring to check the hæmorrhage of small oozing by sponge or gauze or other means we do injury to the tissues. We accomplish a good work by the avoidance of this injury.

BALTIMORE, Feb. 3, 1893.

Dr. G. J. Preston exhibited a patient suffering from a peculiar nervous affection of his left arm. The patient, a man of twenty-six, has done hard work all his life. Has used his left hand rather more than the right. Last October he had a fall and struck on the shoulder and arm of the affected side and the pathological condition developed soon after. The arm is very muscular and there is no evidence of paralysis, no loss of sensation and electric reflexes perfectly normal. The patient's hand assumes all sorts of queer positions, due to contracture of the muscles, and no sooner is one position reduced than another one immediatly ensues, due to the contracture of a different group of muscles. These peculiar phenomena disappear entirely during sleep. Dr. Preston was inclined to believe that the condition was one of hysteria.

Dr. Walter B. Platt read a paper upon the "Factor of Age in Surgical Operations." His conclusions were based upon operations done by himself upon children and aged people. He has never seen any ill effects in children from confinement to bed for weeks and months in hygienic surround-

ings. They stand confinement to bed and house better than any other age. In them ether anæsthesia is quickly induced and consciousness quickly regained. He has never seen any bad effects on the circulatory system during or after the administration of anæsthesia in children. The only case of shock which he has seen was in a case of osteo-myelitis of the femur where a great deal of suppuration had been going on for two or three years. A proportionate hæmorrhage is probably better borne by a child than by an adult. Children do not tolerate well an operation where the intestines are long exposed. Old persons having simply the ordinary senile changes, but being fairly healthy otherwise, can stand operation very well. Confinement to bed is an important matter on old people. If the injury compels them to lie flat on the back, hypostatic pneumonia may put an end to life. They should be watched carefully and propped up if necessary.

Dr. Randolph Winslow reported some cases of compound fracture occurring in young boys.

Dr. J. W. Chambers said that children stand the shock moderately well. He had recently operated upon a child in its second week for double hare-lip with protrusion of the pre-maxillary. The child was under the anæsthetic for three-quarters of an hour, but there was little or no shock. Children stand loss of blood fully as well as other people. They make blood very rapidly. It is very difficult to say how old people stand the shock for the reason that a large number of the old people operated upon are in a pathological condition independent of the condition for which they are operated upon. The tissues of old people heal about as well as those of young persons. If the patient's condition warrants an operation, and the heart and lungs and other organs are good, the question of age is hardly a factor.

Dr. J. D. Farrar read a paper upon "Intestinal Antisepsis in Typhoid Fever by means of Bismuth Subiodide and Salol." He commended the plan in practice at the Cooper Hospital, Camden, N. J. He reported a series of 24 cases with no deaths. The bismuth and salol were given in 5 grain doses, alternately, every three hours night and day. No toxic symptoms from the drugs were noticed. This method of treatment is begun whenever diarrhœa exists and is continued throughout the disease. This treatment is thought to modify the severity if it does not limit the duration of the disease. Tympanites is reduced, diarrhœa controlled and hæmorrhage prevented.

Dr. Norment said that one of the charts exhibited by Dr. Farrar showed the patient to have had a practically normal pulse, temperature and respiration upon admission, and he

thought that the case did not demonstrate so much the benefit of salol and subiodide of bismuth as it did the benefit of convalescence. He thought that further trial was necessary before the utility of the method could be accepted.

W. T. WATSON, *Secretary*.

1519 N. Broadway.

RAILWAY SURGERY AT THE PAN-AMERICAN MEDICAL CONGRESS.

A section of railway surgery of the Pan-American Medical Congress has been organized, with Dr. C. W. P. Brock, of Richmond, Va., as executive president. A full list of officers has been provided for each of the constituent countries. At the eleventh annual meeting of the Wabash Railway Surgical Association—the first organization of the kind—Dr. C. B. Stemen, of Fort Wayne, was by unanimous resolution requested to prepare a paper on “Organized Railway Surgery,” and read the same before the section on railway surgery of the Pan-American Medical Congress. At the same meeting Dr. Hal C. Wyman, of Detroit, offered the following, which was unanimously adopted.

Resolved, That each member of this association solicit his congressman to interest himself in legislation in favor of the Pan-American Medical Congress.

PAN-AMERICAN MEDICAL CONGRESS.

SECTION OF MILITARY MEDICINE AND SURGERY.

The following gentlemen have been duly appointed members of the Advisory Council of this section:

Colonel Louis Read, M. D., Surgeon General, N. G., Pa.

Newton L. Bates, M. D., Medical Director, U. S. N.

J. R. Tryon, M. D., Medical Inspector, U. S. N.

Lieut. Colonel Eustathius Chancellor, M. D., Medical Director, N. G., Mo.

Brv't Lieut. Colonel A. A. Woodhull, M. D., Surgeon, U. S. A.

Major Jos. H. Corson, M. D., Surgeon, U. S. A.

Major Geo. Henderson, M. D., Medical Director, N. G., D. C.

C. N. Hoagland, M. D., Ex-Surgeon, Ohio Vols.

Bedford Brown, M. D., Ex-Surgeon, C. S. A.

H. C. Goodman, M. D., Ex-Surgeon, U. S. Vols.

Melancthon Storrs, M. D., Ex-Surgeon, Conn. Vols.

O. D. Ball, M. D., Pension Ex-Surgeon, Albany, N. Y.

Captain H. O. Perley, M. D., Assistant Surgeon, U. S. A.

GEO. M. STERNBERG,

Deputy Surgeon General, U. S. A., President of Section.

SECTION OF LARYNGOLOGY AND RHINOLOGY.

36 WASHINGTON ST., CHICAGO, Feb. 4, 1893.

The section on Laryngology and Rhinology of the Pan-American Medical Congress is now thoroughly organized, with secretaries in all the countries of South America as well as in the United States and Canada.

The president, Dr. E. Fletcher Ingals, of Chicago, is making a thorough canvass to secure a large number of good papers for the section, and aided as he will be by the able secretaries, Drs. Murray and y Alonso, and the corps of honorary presidents, he feels assured of the success of this department of the congress.

The honorary presidents are: Dr. Harrison Allen, Philadelphia; Dr. Franke H. Bosworth, New York; Dr. J. Solis Cohen, Philadelphia; Dr. D. Bryson Delavan, New York; Dr. J. F. Dixon, Portland, Oregon; Dr. Stephen Dodge, Halifax, Nova Scotia; Dr. W. C. Glasgow, St. Louis; Dr. Frederick I. Knight, Boston; Dr. Geo. M. Lefferts, New York; Dr. Alvaro Ledan, Villa Clara, Cuba; Dr. John N. Mackenzie, Baltimore; Dr. David Matto, Lima, Peru; Dr. P. Emelio Petit, Santiago, Chili; Dr. John O. Roe, Rochester, N. Y.; Dr. Federico Semeleder, City of Mexico, Mexico; Dr. Chas. E. Sajous, Paris, France.

The secretaries for foreign countries are: Dr. Ovejero, Piedad 22, Buenos Ayres, Argentine Republic; Dr. H. Guedes de Mello, Rio de Janeiro, U. S. of Brazil; Dr. G. W. Major, Montreal, Canada; Dr. Felix Campuzano, Virtudes 33, Havana, Cuba; Dr. Luis Fonnegra, Calle 10, Numero 263, Bogota, Republic of Columbia; Dr. Fabricio Uribe, Guatemala City, Guatemala; Dr. Henri Goulaen McGrew, Honolulu, Hawaii; Dr. Angel Gavino, Cocheros 15, City of Mexico, Mexico; Dr. J. Midence, Leon, Nicaragua; Dr. Eugenios Cassanello, San Jose 119, Montevideo, Uruguay; Dr. Napoleon F. Cordero, Merida, Venezuela.

All physicians interested in this section are requested to correspond with the secretaries for the United States,

DR. T. MORRIS MURRAY,

(English Speaking), Washington, D. C.

DR. J. MARON Y ALONSO,

(Spanish Speaking), Las Vegas, N. M.

SECTION ON MEDICAL PEDAGOGIES,

The Pedagogic section will devote its attention especially to the history of the development of medical education in America.

In the papers presented by leading teachers, recent advances in the methods of instruction will be considered.

The *art of teaching*, which is regarded as a study of great interest in other branches of learning, has received hitherto but little attention from the medical profession.

The section in Medical Pedagogies will therefore be made a prominent feature of the courses, and it is hoped that those interested in medical education will co-operate in the work of this section by being present and by actively engaging in the discussion of subjects presented.

Any inquiries or communications may be made through the secretaries undersigned.

J. COLLINS WARREN, M. D.,
Executive President, Boston, Mass.

CHARLES L. SCUDDER, M. D.,
English Speaking Secretary, Boston, Mass.

WM. F. HUTCHINSON, M. D.,
Spanish Speaking Secretary, Providence, R. I.

ANNUAL MEETING OF THE NATIONAL ASSOCIATION OF RAILROAD SURGEONS.

Preliminary announcement of the special programme of the sixth annual meeting of the national association of Railway Surgeons, embracing the United States of America, the Dominion of Canada, the Republic of Mexico, to be held at Omaha, Neb., the last Wednesday, Thursday and Friday of May, 1893.

GENERAL SUBJECT.

Injuries of the Cord and its Envelopes Without Fracture of the Spine.

1. History, by Dr. Geo. Ross, Chief Surgeon Richmond & Danville R. R., Richmond, Va.
2. Anatomical Landmarks, by Dr. Jabez N. Jackson, Surgeon Wabash R. R., Kansas City, Mo.
3. Physiology of the Spinal Cord, by Dr. A. P. Grinnell, Chief Surgeon Central Vermont R. R., Burlington, Vt.
4. Experimental Research, by Dr. B. A. Watson, Surgeon Pennsylvania R. R., Jersey City, N. J.

5. An Experimental Study of Spinal Myelitis and Menen-
gitis, by Dr. Geo. A. Baxter, Div. Surg. Chattanooga South-
ern R. R., Chattanooga, Tenn.

6. The Clinical Aspects of Spinal Localization, by Dr.
Nicholas Senn, Surgeon Chicago, St. Paul & Kansas City R.
R., Chicago, Ill.

7. Diagnosis from the Standpoint of the Neurologist, by
Dr. C. H. Hughes, Consulting Surgeon Missouri Pacific R. R.
St. Louis, Mo.

8. Pathology and Pathological Anatomy, by Dr. Samuel
C. Benedict, Surgeon Richmond & Danville R. R., Athens, Ga.

9. Prognosis, by Dr. Samuel S. Thorn, Chief Surgeon,
Toledo, St. Louis & Kansas City R. R., Toledo, Ohio.

10. Treatment, by Dr. W. B. Outten, Chief Surgeon
Missouri Pacific R. R., St. Louis, Mo.

11. Medico-Legal Aspects, by Judge J. H. Collins,
Chief Counsel Balto. & Ohio R. R., West of the Ohio river,
Columbus, Ohio.

12. Statistics of the amount of money paid by the railroads
of the United States, during the last ten years, for alleged in-
juries of the spine, by Dr. F. K. Ainsworth, Surgeon South-
ern Pacific R. R., Los Angeles. California.

13. Clinical Report—1st, From a Medical Aspect—(a)
permanent injuries—(b) alleged injuries. 2d. From a Legal
Aspect—(a) settled with suit—(b) settled without suit—(c)
Miscellaneous, by Dr. Geo. Chaffee, Surgeon Long Island R.
R., Brooklyn, N. Y.

E. R. LEWIS, M. D.,
Secretary, Kansas City, Mo.
C. W. P. BROOK, M. D.,
President, Richmond, Va.

THE ELEVENTH INTERNATIONAL CONGRESS OF MEDICINE.

The inauguration of the Eleventh International Congress
will take place the 24th of September, 1893. in the presence of
H. M. the King of Italy.

The following officers will preside: President, Prof. G.
Baccelli, Rome; Treasurer, Prof. L. Pagliani, Rome; Sec-
retary General, Prof. E. Maragliano, Genoa.

The work of the congress will begin in the nineteen sec-
tions on the morning of the 25th of September. It will be con-
tinued in accordance with the arrangements to be made and
published both for the general sessions and the sections. Some
of the general sessions will be devoted to scientific addresses
delivered by scientists of all nations.

LIST OF THE SERIES.

1. Anatomy.
2. Physiology.
3. General Pathology and Pathological Anatomy.
4. Pharmacology.
5. Internal Medicine.
6. Diseases of Children.
7. Psychiatry, Neuropathology and Criminal Anthropology.
8. Surgery and Orthopedy.
9. Obstetrics and Gynæcology.
10. Laryngology.
11. Otology.
12. Ophthalmology.
13. Odontology.
14. Military Medicine and Surgery.
15. Hygiene.
16. Sanitary Engineering.
17. Dermatology and Syphilidology.
18. Forensic Medicine.
19. Hydrology and Climatology.

REGULATIONS.

1. The Eleventh International Congress of Medicine will be inaugurated in Rome, on the 24th of September, 1893, and will close on the 1st of October.

2. Any physician may become an active member of the congress by fulfilling the conditions of membership, inscribing his name, and securing his admission ticket.

3. Scientists of other professions who, through their special studies, are interested in the labors of the congress, may acquire the rights and assume the duties of active members, and participate in the work of the congress, both by communications and discussions.

4. The fee for admission to the congress is twenty-five francs, or five dollars.* It entitles to a copy of the transactions of the congress, which will be forwarded to the members immediately after publication.

5. The character of the congress is strictly and exclusively scientific.

6. The work of the congress will be divided amongst nineteen sections; every member is requested to indicate, on paying his admission fee, the section for which he desires to be inscribed.

7. The provisional committee will arrange the appoint-

* Money order or check to the treasurer, Professor Comm. L. Pagliani, Rome, Italy.

ment, in the opening session, of the permanent officers. They will be a president, three vice presidents, a number of honorary presidents and secretaries. Each section will elect, in its first meeting, its president and a certain number of honorary presidents, who shall alternately take the chair during the session. Some of the secretaries will be chosen from among the foreign members in order to facilitate the recording both of communications and discussions in the different languages.

8. There will be daily sessions, either general or sectional. The times and numbers of the general sessions, and the business to be transacted in them, will be arranged by the president of the congress.

9. The general sessions are reserved (*a*) for the consideration of the common work of the congress and of its common interests; (*b*) for addresses and communications of general interest and importance.

10. The addresses in the general sessions, and in such extraordinary sessions as may be arranged, will be delivered by members chosen by the committee for the purpose.

11. Papers for and communications to the congress must be announced on or before June 30, 1893. A brief abstract of every paper and communication, with their conclusions, must be sent to the committee on or before July 31. All of them will be printed and distributed to the members by authority of the president. Such as arrive after that date can not be expected to find a place on the regular order of business, and will be accepted only if time will permit.

12. The business of the sections will be arranged by their presidents, who will also determine the hours of meeting, avoiding those reserved for the general sessions. Two or more sections may hold joint meetings with the consent of their presidents. There will be no vote on scientific questions.

13. Fifteen minutes are allowed for the reading of a paper or communication. In the discussion every speaker can have the floor but once, and for five minutes only. To close the discussion the author of the paper is allowed ten minutes. Additional time may be given him by the president, by special resolution of the section, if the importance of the subject under discussion appear to require it.

14. The manuscript of all addresses, papers and communications read either before a general session or a section must be handed to the secretary before the close of the meeting. A special committee on publication appointed by the president will decide which or what part of them shall be published in the transactions of the congress. Such members as partici-

pated in the discussions are required to hand to the secretaries their remarks, in writing.

15. The official languages of the sessions are: Italian, French, English and German. The regulations, programmes and daily bulletins will be published in the above four languages. During the meetings, however, a member may be permitted to use, for a brief remark, any other language, provided some member present expresses his willingness to translate such remarks into any of the official languages.

16. The president directs the discussion according to the parliamentary rules generally obeyed in similar assemblies.

17. Persons not classified under Article 3, who are interested in the labors of a special section, may be admitted by the president of the congress. They will receive a special ticket on paying their admission fee; will not be entitled to a copy of the transactions; and can not speak in the general sessions nor in any section other than that for which they were inscribed.

18. The president may invite or admit students of medicine to attend and to listen. They will be given a special admission ticket, free of charge.

GENERAL INFORMATION.

JOURNEYS AND REDUCTION OF FARES.—The provisional committee has made arrangements with the different Italian and foreign railway and navigation companies, in pursuance whereof special reduced prices have been granted on the steamers and railways of this country and of the countries which the members of the congress are to traverse.

In Italy the members of congress will find tickets for round trips, starting from Rome; they will thereby be enabled to visit the most important cities and the various universities. In regard to this further notice will be given.

THE LADIES OF THE MEMBERS will be furnished ladies' tickets, which will entitle them to the reduced fares granted to the members, and to participate in the festivities connected with the congress.

FESTIVITIES.—Besides the receptions which the kind and hospitable citizens of Rome will offer to the members, the Italian colleagues will endeavor to return to the best of their power the kindness they experienced during their stay abroad.

On some evening yet to be decided, the members of the different sections will join at a dinner which will be given in one of the first hotels of Rome.

The Italian physicians have formed special committees to show the most hearty and kindly hospitality toward the foreign colleagues.

INTERNATIONAL EXHIBITION OF MEDICINE AND HYGIENE.—On the occasion of the Eleventh International Medical Congress, an Exhibition of Medicine and Hygiene will be inaugurated in Rome, which will gather all that may practically interest physicians and specialists. A special committee has already insured the co-operation of all the most important manufacturers of the world.

HOTELS.—All the first and second-class hotels of the Italian capital will afford to the members, during their stay, all desirable comforts.

PHILADELPHIA ACADEMY OF SURGERY.

THE SAMUEL D. GROSS PRIZE.

The first Quinquennial Prize of One Thousand Dollars under the will of the late Samuel D. Gross, M. D., will be awarded in 1893.

The conditions annexed by the testator are that the prize "shall be awarded every five years to the writer of the best original essay, not exceeding one hundred and fifty printed pages, octavo, in length, illustrative of some subject in surgical pathology or surgical practice, founded upon original investigations, the candidates for the prize to be American citizens."

It is expressly stipulated that the successful competitor shall publish his essay in book form, and that he shall deposit one copy of the work in the Samuel D. Gross Library of the Philadelphia Academy of Surgery.

The essays, which must be written in the English language, should be sent to Dr. J. Ewing Mears, 1429 Walnut street, Philadelphia, before June 1, 1893.

Each essay must be distinguished by a motto, and accompanied by a sealed envelope bearing the same motto and containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay.

The committee will return the unsuccessful essays if reclaimed by their respective writers, or their agents, within one year.

The committee reserves the right to make no award if the essays submitted are not considered worthy of the prize.

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON GENERAL, }
MARINE HOSPITAL SERVICE, }
WASHINGTON, D. C., February 11, 1893. }

A board of officers will be convened at Washington, March 20, 1893, for the purpose of examining applicants for

admission to the grade of assistant surgeon in the United States Marine Hospital Service.

Candidates must be between twenty-one and thirty years of age, graduates of a respectable medical college, and must furnish testimonials from responsible persons as to character.

The following is the usual order of the examination: (1) physical; (2) written; (3) oral; (4) clinical.

In addition to the physical examination, candidates are required to certify that they believe themselves free from any ailment which would disqualify for service in any climate.

The examinations are chiefly in writing, and begin with a short autobiography by the candidate. The remainder of the written exercise consists in examination on the various branches of medicine, surgery and hygiene.

The oral examination includes subjects of preliminary education, history, literature and natural sciences.

The clinical examination is conducted at a hospital, and, when practicable, candidates are required to perform surgical operations on the cadaver.

Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order as vacancies occur.

Upon appointment the young officers are, as a rule, first assigned to duty at one of the large marine hospitals, as at Boston, New York, New Orleans, Chicago or San Francisco.

After four years' service assistant surgeons are entitled to examination for promotion to the grade of passed assistant surgeon.

Promotion to the grade of surgeon is made according to seniority, and after due examination, as vacancies occur in that grade. Assistant surgeons receive \$1600, passed assistant surgeons \$1800 and surgeons \$2500 a year. When quarters are not provided, commutation at the rate of \$30, \$40 or \$50 a month, according to grade, is allowed.

All grades above that of assistant surgeon receive longevity pay, 10 per centum in addition to the regular salary for every five years' service up to 40 per centum after twenty years' service.

The tenure of office is permanent. Officers traveling under orders are allowed actual expenses. For further information, or for invitation to appear before the Board of Examiners, address

WALTER WYMAN,
Supervising Surgeon General, U. S. Marine Hospital Service,
Washington, D. C.

Correspondence.

SHREVEPORT CHARITY HOSPITAL.*

Editor of New Orleans Medical and Surgical Journal:

I have promised you something about the Shreveport Charity Hospital—something historical and descriptive.

As prefatory, it may not be uninteresting briefly to review the conditions leading up to the establishment of this beneficent institution.

Soon after the close of the late war, about the year 1867, Shreveport began to grow rapidly, not only in her dimensions but in her aspirations also, and in some measure to imbibe metropolitan ideas.

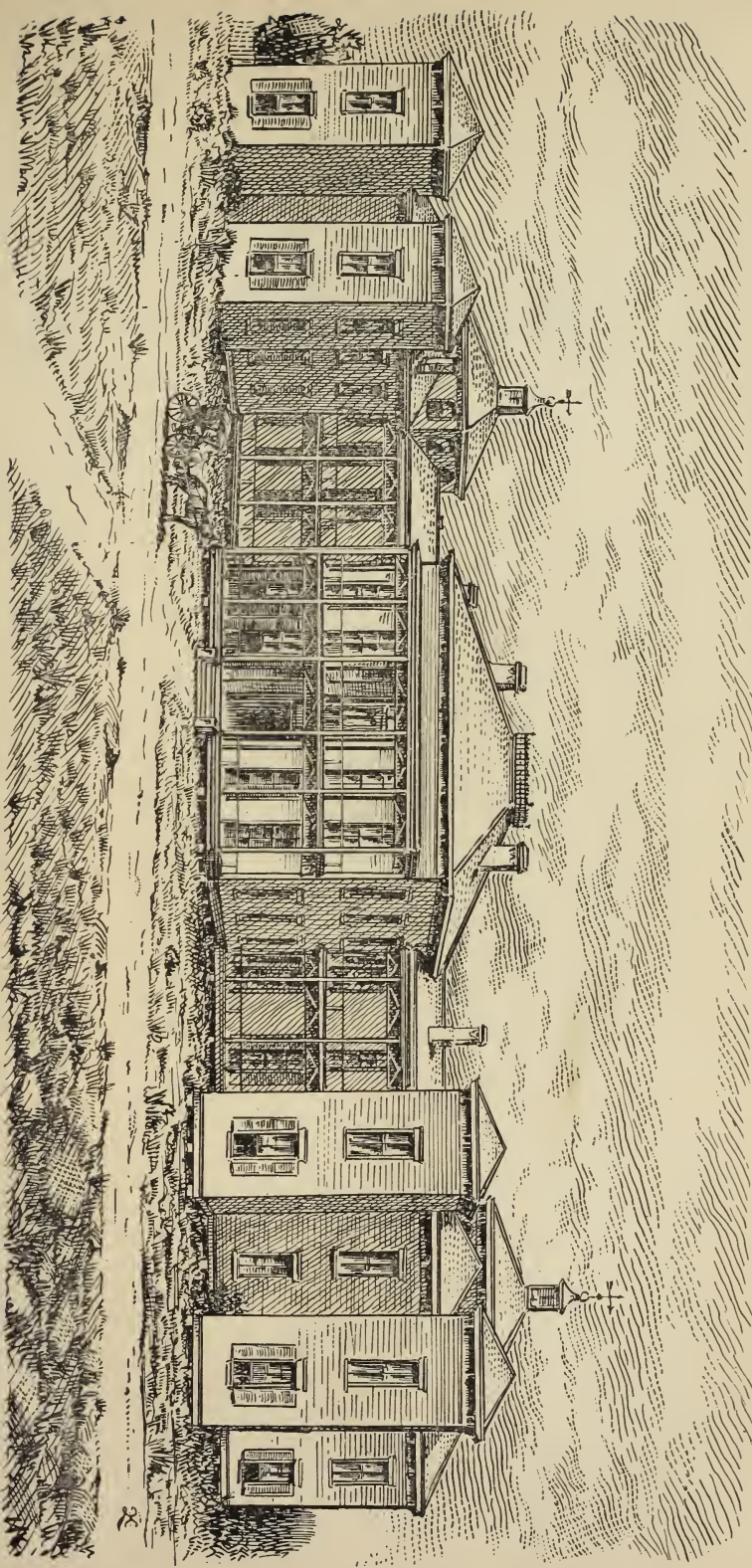
Among other things born of these times was the establishment of a medical and surgical infirmary, which, according to tradition—if I have not been misinformed—was also intended to be the nucleus of a medical institution of learning—in other words, a medical college, duly chartered and equipped for the production of medical doctors, the various chairs to be filled by members of the local faculty. I am, however, constrained to say, parenthetically, that this latter consummation has not yet been reached. In consonance with this idea, however, Drs. W. H. Williams, J. S. Cutliff and D. M. Clay— all of them at that time leading practitioners in this city—associated themselves and established a hospital on the corner of Texas and McNeill streets, to which they gave the name of the “Shreveport Medical and Surgical Infirmary.” This institution was maintained several years, and I presume served well its purpose.

During this period the city and parish found it necessary to provide for their indigent sick, and so made a contract to have them cared for in this establishment at so much per diem for each patient. This, then, may be regarded as the inception of the charity hospital idea in Shreveport, or to speak more accurately, the first practical movement in that direction. For some reason, however, the originators abandoned their enterprise, in 1872, and sold the paraphernalia and equipment to Dr. Joseph L. Moore, who removed it to a larger and more commodious building, an old hostlery on Texas avenue, and known in former days as the “Caddo Hotel.” This building

* NOTE.—All the old hospital records were recently destroyed by fire, consequently the data herein furnished have been gathered haphazard, and may not therefore in every particular be entirely correct.

To Mr. P. J. Trezevant, who was long connected with this board, I desire to express my thanks for much of the information gained.

A. A. L.



was more capacious, and deemed better suited in every way for hospital purposes than the other, and was taken by Dr. Moore for the express purpose of treating and otherwise providing for the pauper sick of the city and parish under a contract the same or similar to that made by his predecessors. This contract was closed, and while the institution was in one sense private, yet in *fact* it was a charity hospital, and was always designated as such. In the year 1875 or 1876 Dr. Moore closed his business and removed from Shreveport.

In the meantime it had been demonstrated, (1) that the city and parish must continue to provide its hospital accommodations for their poor, and (2) that this contract plan was much too expensive for permanent adoption, the cost having reached the large sum of from \$10,000 to \$18,000 per annum. Accordingly, in 1876, an enactment was passed by the Legislature that provided for the establishment of a charity hospital in this city, accompanying which was an appropriation of \$10,000 for this purpose, said hospital to be under the exclusive control of a board, to consist of the mayor of the city (*ex officio*), the president of the police jury (*ex officio*), and three members to be appointed by the Governor, the board to choose its own officers. The authority of this body was absolute and upon them devolved the selection of all the hospital officers, which included a surgeon in charge, a superintendent and a corps of resident students. These latter were entered somewhat upon the plan adopted in the case of the charity hospital in New Orleans.

The first board consisted of Messrs. Nick Murphy, mayor, Sam. Head, president of the police jury, and P. J. Trezevant, Simon Levy and W. P. Ford, appointees of the Governor. A prompt organization was effected, with N. Murphy, as president, and P. J. Trezevant, secretary and treasurer. Without delay a piece of suburban property known as "Moss Side" was purchased. This consisted of a rambling old house, once a residence, more recently a female school building, beautifully situated in an oak grove. The grove was attractive, but the building ill adapted to the purposes of a hospital in every respect; some additional houses were, however, constructed, and the "Shreveport Charity Hospital" after a fashion sprang into existence. Dr. T. G. Ford was elected surgeon in charge, and the late Dr. Wm. Turner was chosen superintendent. The duties of the superintendent are analogous to those of a steward and do not, therefore, necessarily require the service of a medical man. Soon afterward were added as resident students Messrs. H. C. Coty, of De Soto parish, W. L. Dickson, of Caddo, and V. S. Jeter, of Texas. Thus was completed the

first staff of the Shreveport Charity Hospital. The election of surgeon and superintendent was held annually. To each of these offices a salary is attached, while the resident students received their board only for their services.

For a series of years Dr. Ford was continued in charge, but was succeeded in 1884 by Dr. W. W. Ashton, now of Alexandria. About this time, or a little later, Mr. T. M. Allen, of this city, was elected to the superintendency in the place of Dr. Turner, who died in office. In 1888 Dr. D. M. Clay was elected to the surgeoncy and remained in the position till his death in September, 1889, immediately following which Dr. J. Walter Allen was elected in his stead, and again re-elected in 1890-91 and 1892, and is, therefore, the present incumbent.

It may be well to state here that in 1886 the original bill was so amended as to change the size and character of the board by increasing it to seven members, all being appointees of the Governor. Why this was done need not be explained here, but it has been found to work more satisfactorily than the former plan. The present board consists of Dr. R. A. Gray, president, who has also presided over the two preceding boards; T. H. Morris, J. H. Prescott, E. H. Randolph, J. J. Horan, R. S. Elliott, W. W. Sebastian, with F. A. Gosman secretary and treasurer, all of them representative citizens.

This numerical increase of the board of control, and especially the selection of a wise and judicious medical man as its presiding officer, has apparently added efficiency to the management of the institution.

From the beginning legislative appropriations of varying sums were made from time to time for maintenance, but in consequence of depreciation of bonds and other causes, the actual means at command were meagre indeed; especially was this true during the period included between the years 1884 and 1888, and it seemed a work akin to that of the Hebrew bondsmen in their hopeless task of making brick without straw for any surgeon in charge to perform his duty, and it is but just to say that they all acquitted themselves with great credit, under conditions most unfavorable.

In 1884 the Legislature made an especial appropriation of \$20,000 with which to construct a new and suitable building, the demand for which had become imperative; but, from some cause, two or three years elapsed before the work was begun. In 1887, however, the present large and imposing edifice was erected—that is, it was enclosed and roofed and otherwise partially finished and was occupied in this incomplete state in the fall of 1888; nor has it yet been finished, though much progress has been made in this direction since

its occupancy. The structure is of wood, two stories high, located out on Texas avenue, toward the southwestern suburbs, and stands upon a commanding eminence, the highest in the city, if not in the parish, and is much the largest public building in Shreveport. Its general configuration may, with a little license, be likened to the letter E, the descriptive details of which the imagination, aided by the accompanying illustration, can supply.

The length or front is 225 feet, the depth 111 feet. A broad hallway extends nearly the entire length of the main building, in both the lower and upper stories. This on the lower floor is intersected by a similar passage leading from the front entrance, forty feet long, upon which open four spacious apartments, viz.: the parlor or reception room, office of surgeon and his assistant, the dormitory of the resident students and a select ward. It may not be out of place here to state that an elegant suite of furniture graces the parlor—the donation of our philanthropic fellow-citizen and ex-senator, Capt. William Robson, of Caddo parish. There are in all ten wards, four of which are 24x52 feet, and located in the two rear extensions above and below; and four are 24x38 feet, one above the other, in each of the two front corners. The intermediate space is devoted to the various other apartments, viz.: the dining room, dispensary, matron's room, armamentarium, store room, linen room, operating room, etc. The kitchen occupies temporarily a short central extension—the central bar of the "E" so to speak—though this was originally intended as the operating room, and may ultimately be thus utilized when the establishment is perfected.

At present the male patients occupy the northern or left, and the females the right or southern side of the building, as one looks out from the front eastward. The hospital has a present capacity of sixty-eight beds, is lighted with gas and supplied with ample sewerage, hydrants, lavatories and bath rooms, in addition to broad and easy staircases; an elevator is in operation from the lower to the upper floor; galleries on all sides abound and afford opportunity for exercise and fresh air to convalescents. The grounds surrounding, which are spacious in front, constitute a lawn 100 feet wide by 400 feet long, gradually inclining to the street, terminated by a terrace and enclosed with a handsome iron railing. They are partly planted in shrubbery, are already decidedly attractive and susceptible of being made very ornamental and beautiful.

In the earlier history of the hospital, as previously stated, a superintendent, apart from the medical staff, was provided, but for the past six or eight years this duty has been devolved

upon one of the resident students, generally one of the older and most experienced of this body. Very recently, however, the board has created the office of Assistant Surgeon, *ex-officio* Superintendent. For this office Dr. T. E. Schumpert, of Spring Ridge, Caddo parish, was chosen. Dr. Schumpert is one of our promising and rising young surgeons and has already signalized himself by the performance of quite a number of important operations, and fills most appropriately and satisfactorily his new position.

The present hospital staff is as follows: Surgeon-in-Chief, J. W. Allen, M. D.; Assistant Surgeon and Superintendent, T. E. Schumpert, M. D.; Resident Students, Messrs. E. E. Simpson, Caddo parish, and S. E. Prince and Paul A. Lawrence, of Bossier parish; Matron, Mrs. Kate Flournoy.

Under their joint administration the hospital is well conducted—indeed, maintained in as high degree as possible under the existing conditions of insufficient support, the present annual appropriation not being enough to meet the reasonable demands of the institution.

Dr. J. W. Allen, the surgeon in charge, is one of our most prominent physicians and does a large general practice, yet finds time to devote very close attention to the unfortunates who come under his professional care in this hospital. During the year 1892 the number of patients treated was as follows: whites 484, colored 771; males 938, females 317, total 1255. Of this number 52 died, giving a mortality rate of 40.63 per thousand. When we consider the character and conditions of those who seek charity hospital service, the incurably sick, the fatally injured, the many that are brought in when actually dying, we hesitate not to aver that the record as above shown is excellent and reflects great credit upon Dr. Allen and his faithful co-laborers.

In addition to the advantages of this institution as a charitable and philanthropical enterprise, it has proved a most excellent clinical school for many young men of North Louisiana, who have at different times filled the station of resident students, most of whom have since become active and successful practitioners in this and other States. If we may revert to the original infirmary—the first mentioned—we find that it was there that Dr. Thos. G. Ford took his earliest lessons in the science and art of practical surgery, a department of the profession in which he has since attained distinction, while Dr. A. R. Booth, now in charge of the marine hospital service in this city, was, when a student, associated with Dr. Boone in the second hospital venture of Shreveport, and in 1873, during the memorable epidemic of yellow fever, he, in connection with his preceptor, made a special study of that disease by means

of numerous autopsies, a field for investigation by no means circumscribed at that time.

Among the "resident students" of the "Shreveport Charity Hospital" proper appear the names of Dr. H. C. Coty, at present the parish coroner and a member of the Board of Health; Drs. W. L. Egan, Randall Hunt and S. H. Hicks, all "busy practitioners" of Shreveport; Dr. Wm. Sutherland, Mansfield; C. H. Irion, Rocky Mount; M. M. Bannerman, Grand Cane; W. T. Dickson, Rush Point; R. D. Greening, Coushatta; J. M. Billiu (son of Dr. D. H. Billiu of this city), now of New York City; V. S. Jeter, Atlanta, Texas; and more recently Messrs I. M. Calloway, H. J. Parsons, Rawley Penick, W. E. Cole, J. S. Allison and A. F. Stevenson. These latter have not yet completed their medical course. Besides the aforementioned there are many others whose names have escaped me. Of the above, Drs. Irion, Greening, Billiu, Calloway and Parsons served as superintendents and acting assistant surgeons at some period during their respective incumbencies.

While I have endeavored to show that the physical necessities of our hospital patients are well provided for, it is pleasing to note that their spiritual wants are not forgotten. Under the auspices of the Young Women's Christian Association, of which Mrs. E. H. Randolph is president, a religious service is held in the hospital once every week, conducted alternately by the pastors of the Methodist, Presbyterian, Episcopalian and Baptist churches respectively. The young ladies attend, and with an organ accompaniment lead the singing. The patients to a great extent, participate in these exercises and seem much to appreciate them. In addition to this the ladies of the city have been accustomed for many years to provide a sumptuous dinner every Christmas day for the poor and friendless whom misfortune has brought within the walls of this charitable institution.

From what has been said I think it is apparent that the "Shreveport Charity Hospital" has already established its claim to most favorable consideration, even in the face of the long continued and persistent obstacles that from the beginning have militated against its progress—the chief, and I may say the only patent one, of which is a want of money. With the means at command to complete, fully equip and maintain the present large and admirably adapted building, there is no reason why we should not here in Shreveport have a hospital in all respects equal to any in the Southwest outside of the city of New Orleans. Let us hope, therefore, that our Legislature at its next session may realize the importance and desirableness of this consummation, and make provision accordingly.

A. A. L.

N. O. Medical and Surgical Journal,

ESTABLISHED IN 1844.

PUBLISHED MONTHLY, \$2.00 A YEAR.

Articles from physicians are respectfully solicited. All articles, news and exchanges, and books for review, should be sent to the EDITOR, NEW ORLEANS MEDICAL AND SURGICAL JOURNAL. Business communications should be addressed to the BUSINESS MANAGER, NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

EDITED AND PUBLISHED BY
AUGUSTUS McSHANE, M. D

COLLABORATORS:

DR. F. W. PARHAM. DR. H. W. BLANC. DR. A. W. De ROALDES,
DR. R. MATAS. DR. JOHN DELL'ORTO,

Editorial Articles.

THE STATE MEDICAL SOCIETY.

On May 9, 1893, the Louisiana State Medical Society will hold its fifteenth annual meeting in New Orleans. The necessity for organization is appreciated in all the walks of life, even the least esteemed ranks of unskilled laborers have for many years formed associations for the advancement of their interests. It seems strange, to the casual observer, that well educated members of one of the learned professions should be slow to avail themselves of the advantages that must necessarily accrue from thorough, active organization. Scarcely more than one-fifth of the physicians of this State have joined the State Medical Society. This, on its surface, is not a creditable showing. When we take into account, however, the difficulties which the gentlemen living in the parishes have to contend with, we put aside the spirit of fault-finding and commend the devotion of those who are willing to sacrifice a part of their own interests in order to build up the State medical organization. It is the public-spiritedness of these men that made the society a possibility in the beginning, and which still sustains it. The membership

has increased from year to year, but not as rapidly as its well-wishers would have desired. It is pleasant to learn from the president, Dr. J. B. Elliott, that some of the chairmen of the district committees have already made preliminary reports to him. These gentlemen were requested to solicit non-members to make application for membership. Those who have reported say that the results are very encouraging; and if other committeemen show equal zeal, we may confidently look forward to a very large increase in our membership at the next annual meeting.

CHLORATE OF POTASH IN LEPROSY.

The *Provincial Medical Journal*, of Leicester, England, quotes an article from the *Centralblatt für Chirurgie* upon use of chlorate of potash in leprosy. Mons. Carreau saw a leprous patient bitten by a rattlesnake, and observed a marked diminution in the size of the tubercles twenty-four hours after the bite. The inoculation of a serpent poison produces a condition of methæmoglobinæmia, indicated by black fluid blood, jaundice, and internal and external hæmorrhages. Recognizing this fact, M. Carreau resolved to produce this condition by a medicinal agent, and he accordingly gave to a leprous patient very large doses of chlorate of potash. He gave from 150 to 300 grains of the drug daily for three days, producing grave symptoms; but when the poisonous symptoms subsided, the leprous tubercles almost entirely disappeared, leaving the skin soft and wrinkled. This seems rather heroic, but it opens up a vista of possible future uses of this remedy in other diseases due to microbes, as well as hopeful with regard to leprosy itself.

Carreau's experience recalls the attempts of Unna, of Hamburg, to cure leprosy with ichthyol and resorcin. In a series of *Dermatologische Studien* he dilated upon the value of the two remedies just mentioned as reducing agents—they are greedy for oxygen. The bacillus of leprosy is ærobic, and oxygen is as necessary to its existence as to ours. By cutting off the supply of oxygen locally, Unna hoped to destroy the bacillus in the affected spots. He used strong ointments and

solutions of the remedies, and the results that he reported showed that the leprous processes had been modified, at least. By administering overwhelming doses of chlorate of potash, Carreau produces a condition of methæmoglobinæmia, in which the blood refuses to give up readily its oxygen to the tissues; so here we have a general deficiency of oxygen instead of a local one. The result, as far as the bacilli are concerned, is the same. They perish (or become quiescent) from want of oxygen. If it should so be that the system of the patient can stand the lack of oxygen better than the bacilli, then the therapist will only have to produce gradually a condition of asphyxia and let the bacilli and the patient fight it out on that line. If the bacilli can manage to get along without oxygen for a while, so much the worse for the patient. The prevalence of leprosy in Louisiana makes the subject one of lively interest to us, and we should test every fact that might, even in a small measure, help us to battle against this dreadful scourge.

NEW ORLEANS SANITARIUM.

New Orleans at present rejoices in having a hospital owned and controlled by medical men. The New Orleans Private Hospital Company, Limited, has bought out the former Hospital for Women and Children (later called the H. Sophie Newcomb Hospital). The Training School for Nurses, a valuable and much needed institution, was commenced before the hospital, and the hospital was the outcome of the need of practical work for nurses. The work done in our midst by the devoted and skilful women trained in this school is a living and unassailable argument for the continuance of such a necessary adjunct to every civilized community. It is gratifying to learn that the sanitarium, with a bright future before it, will serve as a practical drilling-ground for the women who make the alleviation of human suffering their mission in life.

The stockholders of the New Orleans Hospital Company, Limited, held a meeting on January 25, 1893, and elected the following board of directors: Drs. Geo. K. Pratt, Chas.

Chassaignac, F. W. Parham, Oscar Czarnowski, Isadore Dyer, Mr. Jno. M. Baldwin, Mr. Geo. J. Friedrichs.

On January 28, the board elected the following officers: President, Dr. Geo. K. Pratt; secretary and treasurer, Dr. Isadore Dyer.

The forty-fourth annual session of the Medical Association of Georgia will be held in Americus, on April 19, 20 and 21, president, A. A. Smith, M. D., Hawkinsville; vice presidents, Geo. J. Grimes, M. D., Columbus, and Robt. H. Taylor, M. D., Griffin; secretary, Dan H. Howell, M. D., Atlanta; treasurer, E. C. Goodrich, M. D., Augusta.

Abstracts, Extracts and Annotations.

MEDICINE,

THE TREATMENT OF DIABETES MELLITUS BY MEANS OF PANCREATIC JUICE.

By HECTOR W. G. MACKENZIE, M.D., F. R. C. P., Assistant Physician to the Royal Free Hospital and the Hospital for Consumption, Brompton.

In the *British Medical Journal* for January 7 Dr. Mansell-Jones suggests that as the juice of the thyroid gland appears to be almost a specific in myxœdema, pancreatic juice administered before or after meals should be given a fair trial in diabetes, as this disease, he adds, in most cases, appears to be due to disease or disordered function of the pancreas.

Neither pathology nor physiology, however, lend much encouragement to the hope that diabetes mellitus will prove tractable in such a simple way. In the first place, the pathogenesis of this disease is much more complex than that of myxœdema, and disease of the pancreas accounts for probably only a fraction of the cases of this malady. In the second place, even if it were a fact that in most cases diabetes was due to disease or disorder of the pancreas, the analogy of this doubly active gland, both excreting and secreting, with the ductless thyroid gland is not a very close one. There is some reason, however, on theoretical grounds, for the belief that pancreatic

juice might have some beneficial effect even in non-pancreatic diabetes.

The recent researches into the pathology of the pancreatic form of diabetes mellitus, of which a most interesting account was given by Dr. Vaughan Harley in the *British Medical Journal* for August 27, 1892, make it very probable that, in addition to the well known tryptic, diastatic, fat-splitting, and milk-curdling ferments, a glycolytic ferment is also produced by the pancreas. Assuming the existence in the normal pancreas of this latter ferment, I thought it possible that the administration of a pancreatic extract by the mouth might have some beneficial action in diabetes mellitus by assisting to destroy the sugar in the blood. Acting on this idea, therefore, I anticipated Dr. Mansell-Jones' suggestion, and for some time past have been treating in a tentative way two pronounced cases of diabetes mellitus under my care at the Royal Free Hospital, by the administration of liquor pancreaticus in half-ounce doses given three times a day immediately after food. It is the generally received opinion that, when given in this way, the liquor has no appreciable digestive power, so that we may put the latter effect on one side. No other medicine was given after this treatment was started, and in every respect the patients remained under the same conditions as before.

In both cases the patients have assured me they have experienced benefit from the treatment. I should not have attached so much importance to their statements had it not been that, without any suggestion on my part or collusion on the part of the patients, who attended on different days, there was a remarkable agreement in the accounts they gave of this beneficial effect. They both said they had lost to a great extent their feeling of lassitude and languor, and felt stronger in every way. Their thirst, moreover, had considerably lessened, and they had passed a smaller quantity of urine. These beneficial effects, moreover, have continued. The specific gravity of the urine and the relative amount of sugar have, on the other hand, not been affected.

In an in-patient under the care of my colleague, Dr. Samuel West, his house physician, Dr. Rendel, informs me that since the administration of liquor pancreaticus, the amount of fluid imbibed during the twenty-four hours, which had previously averaged twelve pints, has fallen to six pints, with a similar decrease in the amount of urine passed.

In a disease like diabetes we must be thankful for even small mercies. For myself I would rather find an improvement in the general condition of the patient, increased strength, diminished thirst, and diminished quantity of urine as a result

of treatment than a mere diminution of the amount of sugar in the urine without such improvement. I should have preferred, of course, to have found both results. It is evident that liquor pancreaticus is no specific, but the effects in these cases are encouraging enough to induce me to make further trial of it, and it is possible that in cases of true pancreatic diabetes the benefit might be greater.—*British Medical Journal*.

THE TREATMENT OF DIABETES BY PANCREATIC EXTRACTS.

By NEVILLE WOOD, M. R. C. P. Lond., Clinical Assistant Victoria Hospital for Children.

This plan, proposed in the *British Medical Journal* of January 7, occurred to me early last year as worthy of a trial from certain theoretical considerations. I append a brief summary of two cases, in which the method was employed at my suggestion:

CASE I.—This case at the Chelsea Infirmary was kindly placed under the treatment by Mr. Moore. It was of the so-called pancreatic type. A boy, aged 13, whose father had recently died of diabetes, had suffered from symptoms of diabetes before beginning this treatment for six months. From January 1, 1892, he was placed on diabetic diet, and was given first codeine, from which he received no benefit, and then morphine, under which he improved. The zymin treatment, with diet as before, was begun May 18. His general condition was bad, appetite not ravenous, thirst great, weight 5 st. 10¾ lbs., quantity of urine in twenty-four hours about 90 oz., sp. gr. 1036, sugar estimated at 6.5 grains per ounce. Zymin was given in increasing doses, with the subsequent addition of sodium bicarbonate, and finally pancreatin pills, coated with keratin, were substituted. A daily record of the amount and specific gravity of the urine was kept, and quantitative estimations of sugar were made with Fehling's solution. The treatment was continued till August 21, when he left the infirmary. Unfortunately, owing to deception on the part of the patient, and dietetic indiscretions, which caused diarrhœa on more than one occasion, many of the observations are valueless, and, with the amount of comment necessary, would be out of place in this summary. What is certain is that his general condition vastly improved, his weight increased seven and one-fourth ounces, and thirst diminished. During the first ten days of treatment the amount of urine in twenty-four hours averaged 78 ounces, and for the last ten days before leaving it averaged 35 ounces, while the specific gravity for the same period averaged 1036 and 1027 respectively. The first

reliable quantitative estimation of sugar, made May 20, gave 6.5 grains to the ounce; the last, made at the end of June, 4.5. The boy was readmitted November 5, and is still in the infirmary. He is improving under opium, but has not reached the standard of last summer under the pancreatic treatment.

No definite deductions can be made from this case owing to the facts already mentioned, that he was improving at the time zymin was commenced, and the intractability of the patient, while the summer weather and the continuance of restricted diet were in his favor. Its value is also less because press of work prevented me from making a sufficient number of quantitative estimations toward the close of the case. Nevertheless the improvement in general condition, and in some of the cardinal symptoms of the disease, while he was taking pancreatic preparations, compared with the periods under opium and the alkaloids, is perhaps worthy of record.

CASE II.—The observation of this case at St. George's Hospital was kindly permitted me by Dr. Cavafy. A woman, aged 24, who gave no family history of diabetes, had suffered from symptoms for about four months before beginning pancreatic treatment. Previously to this diabetic diet and codeine were given. Pancreatic treatment was commenced June 10, 1892, and continued till she left the hospital on July 19. The diet was not changed, and zymin, etc., was used as in the previous case. At the outset the general condition was that of debility, the amount of urine varied between 2500 and 4000 c. c., specific gravity about 1034, and the percentage of sugar 7. The general condition of the woman improved, and she gained 3 lbs. in weight, but she complained of increased thirst. The amount of urine remained about stationary, and while the specific gravity ranged rather lower, the percentage of sugar increased to 10. She went to the Convalescent Hospital at Wimbledon, and left there for her home September 21, still further improved in her general condition. On September 26 she was readmitted at St. George's, rapidly fell into coma, and died on the 27th. The necropsy showed no notable lesion, and the pancreas is described as "not abnormal, soft like the rest of the body."

In this case, of the cardinal symptoms, diuresis was unchecked, while thirst and the excretion of sugar increased. The increase of weight is possibly attributable to the better assimilation of her food, perhaps of the freely supplied hydrocarbon element. The fall in specific gravity may perhaps be explained on a somewhat similar hypothesis.

From the observation of these two cases I have little hope that diabetes can be influenced by pancreatic preparations in

the same way that myxœdema is by thyroid juice. A subsequent perusal of the interesting monograph on Pancreatic Diabetes by Dr. Thiroloix has inclined me to agree with that author that, while in some cases pancreatic lesion is a probable factor, it is not the chief one, and we must look for the essential pathology in some part of the nervous system, perhaps in the great sympathetic ganglia of the abdomen.—*British Medical Journal*.

A CASE OF CROSSED PARALYSIS FROM CEREBELLAR DISEASE.

By ANGEL MONEY, M. D., F. R. C. P. LOND.

The patient was a man, aged 50, first seen in January 1890, who had served for many years as a soldier, chiefly in India, but who now followed the occupation of a coachman. Twenty years ago he had a hard chancre, followed by secondary skin eruption and sore throat, for which he was treated by the army surgeon and apparently cured. His family history was good, and he had not suffered from any other serious illness. The present affection began about a year previously with pains shooting up the back of the head and down the arms, chiefly of the right side. He experienced occasional attacks of giddiness in which he tended to turn toward the right side. His bowels were very obstinately constipated; at times he had difficulty in commencing to make water, at other times the urine escaped with a rush involuntarily. He was troubled somewhat with satyriasis, the sexual act being otherwise apparently unimpaired.

The pain at the back of the head increased in severity and became more constant; occasionally there was frontal headache; he slept badly; the intellect was fairly clear; the memory for recent events appeared lately to be impaired. For three months past he had suffered on many days from nausea on rising in the morning, and this had generally ended in severe retching and vomiting; during this period he had not lost appetite for breakfast, and the gastric symptoms usually mended after he had been up some minutes. It often seemed as though the vomiting was excited by the assumption of the erect posture; it could occasionally be warded off by postponing the hour of rising; it was frequently paroxysmal, occurring for two or three days running and then missing some days. Romberg used to insist on the circumstance that nausea did not attend cerebral vomiting, yet this experience is not invariable. There were no reasons for believing that the patient was addicted to alcoholic excess, and spirits always increased his headache. The gait was decidedly reeling, and like that of a

drunken man; curiously enough this was almost always more marked in the first half of the day, and tended to mend considerably in the afternoon. The headache was generally more marked at night-time, and was the chief cause for his not sleeping well. He could walk some yards without falling and with the aid of a stick; on standing with the eyes shut the tendency was to fall toward the right. He was decidedly weaker on the right side of the body; the grasp of the right hand was very feeble. He was right-handed. The articulation was not apparently altered, and his speech did not seem to be changed. There was no nystagmus and no tetanoid rigidity. The knee-jerk was exaggerated on the right side, and there was a marked ankle clonus; a front-tap contraction was easily obtained. There was exaggeration of the triceps and biceps deep reflexes on the right arm. The cutaneous reflexes were absent on the right side; the left plantar reflex was excessive, as also was the left cremasteric reflex.

Except for some delay of the sensation of pain produced by sticking the sole of the right foot with a pin, there was no disturbance of sensation, either to touch or temperature.

The pupils contracted naturally on accommodation, but sluggishly to mere light. Pinching and faradizing the skin of the neck caused well-marked dilatation of the pupil on each side. The tongue was always thrust out to the *left*, and its movement was decidedly jerky; in common hemiplegia of the right side the tongue is always put out to the right. Further, the tongue was wasted somewhat on the left side, and marked fibrillary tremors were obvious in the left half. Fibrillary contractions were seen in the muscles of the arm and leg. There was a jerkiness in the weak movements of the right arm, somewhat like that noted in disseminated sclerosis. There was no optic neuritis.

The patient improved rapidly under the influence of iodide of sodium, given in scruple doses three times a day. He lost the headache and giddiness; though the weakness of the right side was still present, yet it improved markedly.

In this case of crossed paralysis the tongue was paralyzed and wasted on the left side, whilst the arm and leg were paralyzed on the right side. A single lesion, causing pressure on the pyramidal tract on the left side of the brain about the site of the origin of the hypoglossal nerve, would best explain the principal symptoms; it is unlikely that there was more than one chief lesion, and this was almost certainly gummatous in nature. The apparent preservation of good articulation would seem to prove that the disease had not disturbed the fibres of the hypoglossal nerve concerned in the innervation

of the lips, the orbicularis oris being supplied by nerve cells near the hypoglossal nucleus. The peculiar reeling gait, the matutinal paroxysmal vomiting, and the occipital headache point to disease of the middle lobe of the cerebellum, though it may well be believed such symptoms are insufficient to conclusively establish its existence. Still, it is known that tumors of the cerebellum may compress and paralyze the hypoglossal nerve as it proceeds from the medulla oblongata, whilst at the same site it may press upon the pyramidal tract above its decussation.

That the gumma did not arise on the surface of the medulla oblongata would appear to be demonstrated by the absence of paralysis of the palate and of the vocal cord on the same side as the lingual paralysis; for it is usual, though perhaps not invariable, to find the palate, vocal cord and tongue all affected on the same side when a tumor arises at the superficial origin of the hypoglossal nerve on the surface of the medulla oblongata.

In other cases of crossed paralysis the hemiplegia may be associated with paralysis of the third, fifth, sixth or seventh cranial nerve.—*Australasian Medical Gazette*.

ON SOME OF THE DOUBLE SALTS OF QUININE, AND ESPECIALLY ON THE HYDROCHLORO-SULPHATE OF QUININE.

1. The Chemistry of Hydrochloro-Sulphate of Quinine.
By Mons. E. Grimaux.

In a preceding note I sought to establish that in the basic salts of quinine the acid is united, not to the nitrogen of the quinoleic group, but to the azote of the other group, probably of a piperidinic nature.

It seemed to me, in consequence, that the nitrogen of the quinoleic group might also be made to unite under the influence of an acid and thus form double salts of quinine with two different acids; salts which, hitherto, had not been prepared. The trials undertaken on this line permitted me to obtain the hydrochloro-sulphate and the hydriodo-sulphate, as also the corresponding phosphates.

The hydrochloro-sulphate is, in fact, a definite chemical compound and not a mere mixture. When left to itself in dry air, or when its crystalline crust is separated from the mother-waters and dried on porcelain at 100 deg. of heat, it gives on analysis the same figures as does the total mass.

The hydrochloro-sulphate of quinine is very soluble in water at 25 deg.—one part of the anhydrous salt dissolves in

1.16 parts of water. It contains 74.2 per cent. of quinine; the medical sulphate ($7 \text{ H}_2 \text{ O}$) contains 74.3 per cent. of quinine.

The hydrated salt fuses at 125 deg., resolving into an amber-colored liquid, which forms, on cooling, a gummy mass. Anhydrous it turns brown in melting, and its fusing point varies indefinitely between 165 170 deg.

If we dissolve the basic sulphate of quinine by means of one-half the quantity of hydrochloric acid we find that solution can be obtained only by the aid of heat to ebullition, and the use of five parts of water. On cooling, a certain quantity of basic sulphate is separated and the liquor retains hydrochloro-sulphate. The salt, to a single molecule of hydrochloric acid, does not appear to exist here, or, in its solution at least, decomposes into basic sulphate and hydrochloro-sulphate.

Following this report Mr. E. Grimaux communicated to the Societe de Biologie (at the meeting of October 20 last) the data upon the same subject which we brought together in the last number (44) of the *Tribune Medicale*, page 699.

Professor Laborde took occasion to forward to the same society a report as follows of the results which he had obtained in his examination of the physiological action of the new quinine salt. (Mons. E. Grimaux first communicated the following to the French Institute:)

2. *Physiological Action Hydrochloro-Sulphate of Quinine.* By Mons. Laborde.

The tests I have made, said Mons. Laborde, upon animals of this new salt of quinine prepared by Mons. Grimaux, have exactly reproduced the symptomatic picture of the physiological and toxic action of quinine.

Characteristic bilateral agitation of the head, in the guinea pig; inco-ordination; motor ataxia; analgesia, localized at first at the point of injection, and afterward becoming generalized; then, at a more advanced stage of the toxic influence, exhilaration and quinic stupor, and, if the dose reaches a toxic total, the phenomena and the processes of terminal asphyxia.

The doses through which these effects were induced varied, in our experiments, from 10 to 20 centigrammes, given in hypodermic injections to guinea pigs having an average weight of 400 grammes. Even with doses of from $2\frac{1}{2}$ to 5 centigrammes we obtained the characteristic phenomena of agitation, inco-ordination or quinic intoxication.

But the point in which the new salt is especially distinguished from its simple congeners, notably the sulphate and the hydrochlorate of quinine, lies in the fact of its more rapid ab-

sorption, in consequence of which its effects are sensibly more prompt. This is probably due, other qualities being equal, to the much easier and greater solubility of the hydrochloro-sulphate of quinine, as compared with that of the single salts of that base.

From this point of view, the hydrochloro-sulphate of quinine must be regarded as a precious medicament for hypodermic employment, and it is a product, by the way, whose subcutaneous use gives rise to no appreciable local irritation.

The hydrochloro-sulphate of quinine seems to me to be called *to render veritable services to therapeutics*.—*La Tribune Medicale*.

FOR BACKACHE.

By V. R. DORRETTA, of New York.

I desire to call the attention of physicians to a form of backache which is very common, is readily cured, yet is not usually treated successfully because of erroneous diagnosis. The wearing pain is really located in the kidneys, sometimes both, usually only one, the left being most frequently affected. It occurs in both sexes, but is observed about twice as often in women as in men.

The sufferer sometimes knows just where the pain is, but is very often completely deceived about the real location of the suffering, thinking the trouble is in front. If on the left side a diagnosis of some disorder of the spleen may be made, if on the right side the liver is thought to be the offender; the pain is often said by sufferers to be located in the groin, and I have known women who uselessly suffered much treatment for ovarian disease who really had only kidney ache.

The urine is often quite normal, but may contain an excess of urates or phosphates; as albumen is rarely observed this disorder is functional, not organic.

The diagnosis is easy: examine the kidneys by making firm, deep pressure between the last rib and the ilium near the spine upward and inward; if this disease be present the patient will instantly admit you have found the real seat of her suffering, although she may have formerly thought it was situated in some part of the abdomen anteriorly.

The following treatment is always successful. I have never known it to fail in one case. I prescribe for aching kidneys and scabies with confidence.

I give two or three drops of the tincture of the chloride of iron and eight or ten drops of the sweet spirits of nitre in a little water, half hour before meals, and after meals a table-

spoonful of the liquid Galega Vera with a gentle laxative; before retiring for the night licorice powder comp. is good. Galega Vera is useful not only in this disease, but is a most effective reconstructive, yielding better result in cases of anæmia and impaired nutrition than any preparation with which I am acquainted.

The plant Galega Vera grows in Southern Europe. The leaves are the parts used; the preparation here advocated can be procured through any wholesale druggist.

SURGERY.

CASES ILLUSTRATING THE DIFFICULTIES IN THE DIAGNOSIS OF CANCER OF THE STOMACH.*

By HENRY C. COE, M. D., Gynecologist to the New York Cancer Hospital; Professor of Gynecology in the New York Polyclinic.

The following cases, which were under observation in my service at the New York Cancer Hospital, possess interest for the physician as well as for the abdominal surgeon. I need not call your attention to the well known symptoms and signs of carcinoma of the stomach, since in a typical case there are few lesions of the abdominal viscera which admit of a more positive diagnosis.

But that the exact anatomical condition may remain in doubt, even after the patient has been under careful observation for a long period, was impressed upon me in my student days, since the first case for "clinical conference" assigned to me by our revered teacher. Dr. Ellis, was one in which the doubt as to the existence of carcinoma or simple non-malignant stricture of the pylorus was only cleared up at the autopsy table, to which I followed my long-suffering patient, after making the last months of his life miserable by repeated examinations. As I remember, he had no distinct tumor, his pain was moderate and he never vomited any blood—facts which puzzled me greatly at the time. Collective investigation has done much to broaden our views of clinical medicine, and to emancipate us from our thralldom to certain fixed rules. Men are no longer disturbed by variations in the types of disease, but are prepared to admit exceptions to every rule. With this general introduction, I present very briefly the following histories:

CASE I.—Mrs. D., æt. 30, married fourteen years, and

* Read at a meeting of the Harvard Medical Club, January 7, 1891.

has borne four children. Entered the Cancer Hospital April 30, 1892. No trace of syphilis. Denies malarial poisoning. A sister has had epithelioma of the uterus for three years. The patient attributes her present trouble to a fall in February, 1891, since which time she has suffered from severe pain in the hypochondrium. Says that she has vomited once or twice a day, after eating, ever since November, 1891, and has seldom been able to take solid food.

I saw the patient about a month before she entered the hospital, with her physician, Dr. J. R. Alvarez, who had had her under careful observation for several months, and had about reached the conclusion that she was suffering from an ulcer of the stomach, with inflammatory thickening in its vicinity. The patient was very nervous and also had an afternoon rise of temperature (seldom exceeding 100 deg F.) of an irregular type, and not controlled by quinine.

On examining the woman, who was small, but wiry and fairly well nourished, I was at once struck with the absence of emaciation, such as would have been expected in a subject of malignant disease of over a year's standing.

Her abdomen was easily palpated, and at a point of tenderness, to the left of the lower end of the sternum, a hard mass, the size of a hen's egg, could easily be felt. It was fixed and apparently attached to the smaller curvature of the stomach, near the pylorus. Weighing all the facts of the case, I was inclined to agree with the diagnosis of the attending physician, that the tumor was of inflammatory origin, and (from the febrile phenomena) that it might be an abscess secondary to perforation of a gastric ulcer, which had been shut off by pre-existing adhesions.

The patient entered the hospital for careful observation. She had a well marked afternoon fever, sometimes as high as 102 deg. F., though her pulse was only slightly accelerated. Quinine in antiperiodic doses was thoroughly tested, without positive results. It was evident that she had chronic gastritis, though she had exaggerated both the severity of the pain and the frequency of the attacks of nausea. She admitted that she had never vomited blood, and that her bowels were moved regularly. She improved a little under strict regimen and medication, but it was evident that there was some obscure visceral trouble which was undermining her health. Acting on the advice of Dr. Weir, who kindly examined the patient under anæsthesia with me, I decided to make an explorative incision, and to at least settle the question of diagnosis. On exposing the mass, I was able to feel and to see that it was a nodule of almost stony hardness on the under surface

of the left lobe of the liver, attached to the lesser curvature of the stomach, near the pylorus, by old inflammatory adhesions. There was no evidence of recent inflammation, nor could any purulent focus be discovered. The adhesions were broken up and the abdomen was closed. The possibility of an abscess of the liver was dismissed from the character of the nodule, which was of cartilaginous hardness and suggested a syphilitic origin. The patient actually felt better after the operation than before, having less pain, rapid disappearance of febrile symptoms and nausea. She was up in ten days and on full diet. Three weeks after the operation she was discharged. I have heard from her within a fortnight. She still complains of pain in the hypochondrium and has occasional attacks of vomiting, but is better than before.

CASE II.—Miss G., æt. 20, housemaid. Four months before her entrance into the Cancer Hospital she began to have severe pain in the hypochondrium, extending through to the back. About the same time she noticed a swelling which slowly increased in size and was quite tender on pressure. For six weeks she had had great pain after eating, with frequent vomiting, until within two weeks of her entrance. She had never vomited blood, but her stools were sometimes dark. She presented a marked anæmic appearance, but was not much emaciated. Three inches below the lower end of the xiphoid a hard, irregular mass, apparently as large as an orange, could be felt; it was freely movable in the long axis of the body, but only slightly in a lateral direction, and was tender on deep pressure. The stomach was moderately distended, displacing the heart upward and to the right. Liver and spleen not enlarged. Dr. W. T. Bull and Dr. Kletzsch (her physician) believed the mass to be probably carcinoma of the pylorus. I inclined rather to the same diagnosis which I had made in Case I, since the age of the patient, her symptoms and general condition did not seem to support the theory of a malignant neoplasm, suspicious as it might appear from its location and apparent rapid growth. Moreover, during several days in which she was under observation, on fluid diet, neither pain nor vomiting was present. An explorative incision, six inches in length, was made by Dr. Bull. Immediately on incising the skin over the most prominent part of the tumor, it was evident that the entire thickness of the abdominal wall was the seat of induration. It was found that the anterior surface of the stomach was firmly adherent to the abdominal wall, and that the supposed neoplasm was a peculiar inflammatory thickening of the wall of the stomach, extending from the anterior aspect over the lesser curvature to the posterior aspect of the organ, but not involving the pylorus. The

affected portion was as large as the palm of the hand. An opening was made into the stomach through which its interior could be inspected. The indurated portion was only slightly vascular and cut like cartilage. The inner surface of the stomach over the affected area presented a smooth, grayish appearance, in sharp contrast with the surrounding mucous membrane.

The pylorus was entirely normal, the orifice admitting two fingers. A bit of the diseased tissue was excised, the opening in the stomach was sutured with catgut, and the abdominal wound was closed with the exception of the lower two inches, which was packed with iodoform gauze. The patient bore the operation well, but was in a serious condition for a few days afterward, having a rapid, feeble pulse and high temperature, but eventually made a good recovery, and two weeks after was eating bread and scraped beef. She gained in flesh and strength, lost her anæmic appearance and was discharged less than two months after entrance, in much better condition than she had been since the beginning of her illness. The inference at the time of the operation that the condition was scirrhus was disproved by the subsequent history of the case as well as by the results of the microscopical examination. Two competent microscopists pronounced the specimen to be simply tissue that had undergone chronic inflammatory thickening. I also examined several slides and could find no evidence of carcinoma.

CASE III.—Mrs. R., æt. 33, married nine years, and the mother of two children. Her mother died of carcinoma of the œsophagus. Very anæmic and somewhat emaciated. She began to lose flesh and strength three months before entering the Cancer Hospital, and for two months had been unable to take solid food without severe pain and vomiting. She had never vomited either blood or “coffee ground” material. On her entrance she complained of constant pain in the hypogastrium, increased even after taking fluid nourishment, and was so weak that she could not sit up. Loud mitral systolic murmur (organic). Irregular atypical elevation of temperature, controlled by large doses of quinine, administered at noon. Spleen enlarged. Tenderness on deep pressure over the pylorus, with a supposed ill-defined mass. Very nervous and hysterical. She was examined by Dr. Weir, who thought that there was an enlargement of the gall-bladder, and possibly a tumor of the pylorus, and advised an explorative incision, which was made. The stomach was at least three times its normal size. The gall-bladder was much distended. Incision closed and patient apparently none the worse for the

operation. She had the same irregular rise of temperature as before. On the eighth day it was 102 deg. F., with a pulse of 116, the respiration being 40. She coughed frequently, but no pulmonary trouble could be detected. Two days later she had a severe rigor and her temperature rose to 104 deg. There were fine rales over the bases of both lungs, but no dullness. She then improved and was able to sit up six days later.

There was no pain in the hypochondrium and she had not vomited since the operation, but the temperature still ranged from 100 deg. to 102 deg., although the pulse was not correspondingly accelerated. She now sat up and walked a little, but was quite weak. On the eighteenth day after the operation, having been up for several hours, she retired to her bed, when she suddenly became cyanotic and died almost immediately.

I made a partial autopsy and found marked disease of the mitral valves, the edges of which were covered with recent granulations. The heart was dilated and fatty. The lungs showed no changes except hypostatic congestion and œdema. There was an ounce of bloody serum in each pleural cavity. The spleen was generally softened, and contained an infarct the size of an English walnut, which had begun to break down. The viscera was enlarged to thrice its normal size, and was drawn over to the right so as to cover the anterior surface of the outer third of the stomach. The stomach was somewhat dilated, the mucosa showing the ordinary appearance seen in chronic gastritis. The liver was enlarged; the gall-bladder was dilated and contained several gall-stones of various shapes and sizes, one of which completely occluded the gall-duct, but there was no evidence of pus formation. Kidneys normal, also intestines. Pelvic organs normal. Brain not examined.

Of these three cases I am free to admit that only in the second was there a strong probability of the existence of malignant disease of the stomach—a probability which seemed almost a certainty after the abdomen was opened.

The lessons from these cases are obvious and may be summarized as follows:

1. Localized pain, vomiting, progressive emaciation and even a well defined tumor of the pylorus are not necessarily indications of the presence of malignant disease. A careful review of the history of the case, prolonged observation of the patient and the absence of that profound disturbance of the general nutrition which we are accustomed to style the “cancerous cachaxia” may sometimes lead us to take a more hopeful view than at first seemed to be justifiable in the presence of the ominous symptoms.

2. The results of medicinal treatment, lavage, diet, etc.,

may prove that the gastric symptoms are really due to chronic gastritis, although it may seem probable that this is merely a complication of some graver visceral lesion.

3. In case of doubt, and where the patient's condition is such as to admit of a radical operation of circumscribed cancer of the pylorus is discovered, an explorative incision is justifiable. The operation is simpler than that undertaken for the examination of obscure pelvic troubles and is more satisfactory, since positive information is obtained by the eye as well as by the finger. Through a small median incision below the ensiform cartilage the upper half of the abdomen can be thoroughly palpated, so that no neoplasm could escape a careful search.
—*New York Polyclinic.*

GYNECOLOGY.

A CASE OF VAGINISMUS TREATED WITH COCAINE.

By J. C. DAY, M. B.

Mrs. S. H., a delicate, pale, extremely nervous and hysterical married lady of English birth, aged 28, who for five years of her conjugal life had suffered from vaginismus in spite of her being treated by all possible means (bromides, leeches, hip baths, purgatives, soothing applications), including division of the hymen, with subsequent dilatation of the vaginal entrance by means of glass dilators. On examination, I found nothing abnormal, no inflammation except some tenderness in the vulva on very deep pressure. The introduction of a middle-sized Ferguson's speculum or a forefinger did not produce any pain whatever. Nevertheless, intercourse invariably was so agonizingly painful that even an idea of it sent the patient into hysterics, while on every attempt she became furious (bit and scratched her husband, etc.). At the same time, sexual desire with her was fairly strong. There was no history of masturbation, and no disproportion between the sexual organs. I recommended rubbing the whole of the vaginal orifice with a 5 per cent. ointment of cocaine and vaseline before each intercourse, and since he suspected that the matter was largely due to the patient's own imagination and fear, reassured her that the ointment given was an absolutely infallible means of curing her ailment. The very first intercourse proved quite painless, and three months afterward the patient was found to be pregnant.

The cure in the case above I ascribe partly to cocaine, partly to moral influence. I never saw any beneficial action of cocaine in several other cases of vaginismus, associated with a

hyperæmic state of the external genital parts—in one of these cases temporary relief was obtained from painting with a 5 per cent. solution of nitrate of silver.

In non-gonorrhœal urethritis in women, intra-urethral suppositories or bougies made of cocaine were able only partly to relieve pain and frequency of micturition. Iodoform and belladonna bougies and ointments gave far better and more rapid results, both in these cases and in those of pruritus vulvæ et vaginæ, of acute colpitis, and hæmorrhoidal inflammation of the rectal and anal veins.

Vaginismus in an aggravated form is not of frequent occurrence, but cases of "Spasm" and "Dyspareunia" are met with in practice from time to time.—*Medical Reporter, Calcutta, India.*

Book Reviews and Notices.

Text-Book of Ophthalmology. By Doctor Fuchs, Professor of Ophthalmology in the University of Vienna. *Authorized Translation from the Second Enlarged and Improved German Edition.* By Dr. A. Duane, Assistant Surgeon of the Ophthalmology and Aural Institute, New York. *With Numerous Illustrations.* New York: D. Appleton & Co. 1892.

For several weeks we have been wishing to make a note about the work of Dr. Fuchs—a note merely, for it would be impossible in a journal of this sort to do anything like justice to this splendid treatise on the diseases of the eye. But what we wish to say is, in a few words, simply this: That it seems to us by far the best text-book on the subject that has so far made its appearance in the English language. Its transcendent merit consists in this, that it deals with the whole matter from the most modern standpoints of pathology and etiology, thus impressing the student from the beginning to the end that he is dealing with diseases, not as a mere collection of names, with an assortment of prescriptions appended thereto, but as complicated organic processes brought about by certain causes, at times definite and well ascertained, at others, it is true, vague and indefinite, but always within the reach of a reasonable conjecture. To all physicians we recommend it, as we are recommending it to our own students who have no text-book on diseases of the eye, as the best addition to their libraries in this direction that it is possible to make.

H. D. B.

State News and Medical Items.

EYE, EAR, NOSE AND THROAT HOSPITAL.

MEETING OF MARCH 1, 1893.

The work of repairing and making additions to the hospital property of the Eye, Ear, Nose and Throat Hospital, on Rampart street, will soon be commenced, and will be finished within ninety days, for the report of the house committee accepting the bid of Messrs. Ibers & Wright, which was presented yesterday to the executive committee of the hospital at their regular monthly session, was unanimously adopted. The bid of these gentlemen for \$4295 was the lowest bid made, and includes all the work specified in the plans of the architects, with the exception of the plumbing and gas fitting. The action of the executive committee on this report of the house committee was the principal business of the meeting, though reports from the treasurer, and Dr. A. McShane, the pathologist of the hospital, were received and ordered filed. Donations were received and acknowledged with thanks from Mr. J. A. Acomb, secretary of the American Legion of Honor, Tulane Council No. 1167, \$5, and from Mr. Harry Chapel, secretary of the Crescent City Musicians' Protective Association, of \$25.

A letter was received from Messrs. L. Graham & Son, stating that they would print the proceedings of the annual meeting of the hospital for the bare cost of the work. The secretary was requested to tender the thanks of the association for the offer.

Mr. Frank Barker, chairman of the house committee, reported that several rooms in the building were being fitted up by charitably disposed ladies, who were contributing the money necessary to have them thoroughly equipped.

The application of Mr. L. D. Archinard for the position of assistant to Dr. A. G. Fredreichs was referred to Dr. A. W. de Roaldes with full power to act.

The report of the secretary for the month of February showed the admissions to have been 464, the consultations 2878, and the operations 48.

There were present at the meeting, Messrs. Chas. K. Hall, Frank Barker, Walter R. Stauffer, John Barkley and J. A. Hincks, secretary; Mr. Hall presiding in the absence of Mr. W. H. Schmidt, chairman of the committee.

THE VALUE OF PROFESSIONAL SERVICES.—It seems to be well understood that the physician is very poorly paid for his services in the majority of cases that he is called to attend, and it is equally interesting to note the circumstances contributing to this unfortunate state of affairs. It may be said without questioning that the people who neglect the payment of their medical bills are, as a rule, able to pay them. This may be proven by the manner in which they spend their money for needless luxuries while neglecting the faithful medical man who has been so essential to their comfort while languishing upon their sick beds. Now the chief reason for this general disregard of the claims of the doctor may be found in the utter want of business principles adopted by the doctor himself. It is proverbially true that people do not pay bills until they are asked to do so, either in the shape of personal appeals or bills duly rendered. The fact is, the average medical man does not ask for his money in a prompt, unflinching and business-like manner, and consequently the people do not know whether he wants it or not. If all of us would place the proper value on our services by demanding prompt and adequate pay for all services rendered, we would have a fair support, the respect of our patrons and something for a rainy day. Try this method for this year, even at the risk of losing some custom and making all of your friends angry, and we will guarantee you more friends and more money at the end of the year. People do not respect, value or pay for services render in a half friendly, half business like manner.—*Doctor.*

Dr. Hawthorn, who died at Amite City, La., practised there for seventeen years.

Dr. J. S. Stephens, Jr., of Natchitoches, La., and Dr. R. M. Littell, of Opelousas, visited the city last month.

Dr. T. P. Underwood, of Crystal Springs, Miss., recently had the misfortune to be thrown from a buggy and have his arm broken.

Dr. John Ridlon has been appointed Professor of Orthopedic Surgery in the Post Graduate Medical School of Chicago.

Dr. W. G. Owen and wife, of Iberville, La., Dr. L. G.

Perkins, of Norwood, La., and Dr. K. B. McMillan, of Texas parish, were in the city during the Carnival.

The United States has one drug store to every three doctors.

The State Dental Society met here on the 15th of February and elected Dr. A. J. Bercier, of Opelousas, president for the coming year.

Dr. Woolverton, of the United States Navy, was in the city recently.

The Surgical and Gynæcological Association holds its next meeting in New Orleans the first Tuesday of November, 1893, under the presidency of Dr. Bedford Brown.

MARRIED.

DUVAL—JASTREMSKI.—On Tuesday, February 7, 1893, at St. Matthews' Church, Houma, La., by Rev. R. H. Praserd, Miss Gwinette Duval and Dr. Leon H. Jastremski.

TARLETON—GOUAUX.—Dr. Marcus B. Tarleton to Miss Louise H. Gouaux, on November 19, 1892, in Houma, La.

The library of the American Medical Association has been removed to Chicago and now placed in charge of the Newberry library.

Dr. J. B. Parrott, formerly of Sabine, has located at Robeline, La.

Dr. T. J. Woolf, formerly of New Iberia, has removed permanently to New Orleans. His office is at No. 5 Bourbon street; residence, 580 Prytania street.

The following States hold their meetings at the places named: Alabama—T. A. Means, secretary, Montgomery; Selma, April 11. Arkansas—L. P. Gibson, Little Rock; Batesville, May 31. Louisiana—P. B. McCutcheon, New Orleans; New Orleans, May 9. Texas—H. A. West, Galveston; Galveston, May 2. Mississippi—H. H. Haralson, Forest; Jackson, April 19. Florida—J. D. Fernandez, Jacksonville; Jacksonville, April 4. Georgia—D. H. Howell, Atlanta; Americus, April 19.

Dr. E. M. Burke, of Jennings, La., was in the city last month.

Dr. N. H. Buie has moved from Mississippi to Hammond, La.

Dr. J. H. Ginnis of Sparta, La., has located at Arcadia, La.

Dr. R. L. Luckett, Jr., of Alexandria, La., was in the city last month.

The officers of the Madison Parish Medical Society are: President, Thos. J. Turpin, Tallulah, La.; Secretary, William Kelley, Tallulah, La.; David M. Dancy, Tallulah, La.; J. B. Bonney, Tallulah, La.; W. P. Yerger, Milliken's Bend, La.; — Graves, Duckport, La.; J. O. Steger, Mound, La.; C. G. Abell, Thomastown, La.; G. S. Johnston, Altoona, La.; S. S. P. Dangerfield, Delta, La.; — Herring, Trinidad, La. They meet quarterly at Tallulah, second Tuesdays in January, April, July and October.

Dr. Charles Stuart Cowie and Miss Margaret Gould Garrett, of Monroe, La., were married February 8.

Dr. J. S. Branch has removed from Evergreen, La., to this city. His office is at 104 Common street.

Dr. L. A. Burgess, of New Iberia, La., after a long illness, is able to be out.

Dr. L. M. Markham, of Denison, attempted to jump from a freight train recently, and as a result his left leg was broken at the knee and the shoulder badly bruised.

Texas reports 2000 cases of small-pox last year with a death rate of 24.6 per cent.

The amended charter of the city of Omaha gives to the board of health a levy of one mill on the assessed valuation of city property, which will realize about \$22,000.

A post-graduate medical school for clinical instruction has been organized in Atlanta, Ga., to be known by the name of Atlanta Polyclinic. The first course opens March 15, 1883.

If the stockings are soaked in a saturated solution of boric acid, and allowed to dry, and be then worn, Professor Hare says that cases of *sweating of the feet* will be cured; and in most cases, if not cured, the odor arising from the sweating feet will disappear.—*College and Clinical Record*.

MORTUARY REPORT OF NEW ORLEANS.

FOR JANUARY, 1893.

CAUSE.	White	Colored..	Male.....	Female....	Adults ...	Children..	Total
Fever, Yellow							
“ Malarial (unclassified)....	5	5	7	3	6	4	10
“ Intermittent							
“ Remittent	2	2	2	2	3	1	4
“ Congestive	5	1	1	5	2	4	6
“ Typho	5	2	4	3	2	5	7
“ Typhoid or Enteric.....	1	1	1	1	2		2
“ Puerperal		1		1	1		1
Influenza	15	3	10	8	15	3	18
Scarlatina							
Measles							
Diphtheria	5		3	2	2	3	5
Whooping Cough							
Meningitis	4	1	2	3	3	2	5
Pneumonia.....	46	37	50	33	62	21	83
Bronchitis	22	14	14	22	22	14	36
Consumption	44	52	58	38	94	2	96
Cancer	7	5	3	9	12		12
Congestion of Brain.....	9	2	7	4	7	4	11
Bright's Disease (Nephritis) ...	19	10	22	7	29		29
Diarrhœa (Enteritis)	14	5	12	7	14	5	19
Cholera Infantum	3		2	1		3	3
Dysentery.....	3	4	2	5	7		7
Debility, General	2	3	1	4	5		5
“ Senile	25	21	20	26	46		46
“ Infantile.....	3	4	3	4		7	7
All other causes	196	106	168	134	216	86	302
TOTAL	435	279	392	322	550	164	714

Still-born Children—White, 34; colored, 23; total, 57.

Population of City—White, 184,500; colored, 69,500; total, 254,000.

Death Rate per 1000 per annum for month—White, 28.29; colored, 48.17; total, 33.73.

F. W. PARHAM, M. D.,
Chief Sanitary Inspector

METEOROLOGICAL SUMMARY JANUARY.

STATION—NEW ORLEANS.

Date.....	TEMPERATURE.			Precipn. in inches and hundredths..	SUMMARY.
	Mean	Max..	Min..		
1	49	54	44	0	Mean barometer, 30.13.
2	53	65	41	0	Highest barometer, 30.49, 16th.
3	53	58	48	0	Lowest barometer, 29.75, 4th.
4	58	69	46	0	Mean temperature, 50.
5	56	64	49	0	Highest temp., 72, 31st; lowest, 29, 20th.
6	44	48	41	0	Greatest daily range of temperature, 31, 9th.
7	52	65	38	0	Least daily range of temperature, 5, 8th.
8	42	45	40	0	MEAN TEMPERATURE FOR THIS MONTH IN—
9	48	64	33	0	1871.....54.0 | 1877.....54.0 | 1883.....57.6 | 1889.....53.0
10	48	55	42	0	1872.....43.0 | 1878.....51.0 | 1884.....47.0 | 1890.....65.0
11	54	68	40	0	1873.....49.0 | 1879.....53.0 | 1885.....52.0 | 1891.....53.0
12	50	55	44	0	1874.....50.0 | 1880.....63.0 | 1886.....46.0 | 1892.....49.0
13	43	53	37	0	1875.....54.0 | 1881.....50.0 | 1887.....51.0 | 1893.....50.0
14	52	65	38	0	1876.....60.0 | 1882.....62.0 | 1888.....56.0
15	42	44	37	0	Total deficiency in temp'ture during month, 108.
16	36	42	30	0	Total deficiency in temp'ture since Jan. 1, 188.
17	41	45	37	0	Prevailing direction of wind, W.
18	51	64	38	0	Total movement of wind, 6439 miles.
19	40	44	36	0	*Maximum velocity of wind, direction and date,
20	37	45	27	0	32 miles, from N. W., 12th.
21	44	51	36	0	Total precipitation, 2.30 inches.
22	50	58	41	0	Number of days on which .01 inch or more of
23	50	60	40	0	precipitation fell, 7.
24	54	64	43	0	TOTAL PRECIPITATION (IN INCHES AND HUNDREDTHS)
25	56	67	44	0	FOR THIS MONTH IN—
26	58	66	49	0	1871.....6.75 | 1877.....5.30 | 1883.....10.63 | 1889.....6.51
27	58	62	53	0	1872.....5.10 | 1878.....5.36 | 1884.....4.35 | 1890.....0.66
28	60	68	52	0	1873.....5.06 | 1879.....2.34 | 1885.....9.70 | 1891.....3.75
29	60	67	52	0	1874.....1.68 | 1880.....1.02 | 1886.....7.53 | 1892.....5.37
30	60	67	52	0	1875.....8.44 | 1881.....11.15 | 1887.....4.26 | 1893.....2.50
31	62	72	53	0	1876.....4.42 | 1882.....4.54 | 1888.....3.29
					Total defic'y in precipitation during month, 2.90.
					Total defic'y in precip'n since Jan. 1, 2.90.
					Number of cloudless days, 19; partly cloudy
					days, 6; cloudy days, 6.
					Dates of frost, —.
					Mean maximum temperature, —.
					Mean minimum temperature, —.

NOTE.—Barometer reduced to sea level. The T indicates trace of precipitation.

* To be taken from any five-minute record.

R. E. KERKAM, *Local Forecast Official.*

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

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No. 10.

Original Articles.

[No paper published or to be published in any other medical journal will be accepted for this department. All paper must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a written order for the same accompany the paper.]

THE REPORT OF FOUR CASES OF LAPAROTOMY AND ONE OF OPERATION FOR STRANGULATED HERNIA.

By GEORGE H. LEE, M. D., GALVESTON, TEXAS.

It is not proposed in this paper to recite a series of cases of laparotomy.

Every important surgical case deserves to be reported not alone from the standpoint of its statistical value, but also because of the instructive features which each offers.

The following were of peculiar interest to the writer, and a concise resumé of the notes upon them it is hoped will not prove uninteresting to other members of the profession. Presenting as they do much food for thought in a diversity of lines, and yet a too limited experience in any particular direction to justify the deduction of conclusions, it is considered best to submit simply the notes without comment.

Mrs. M. B., aged 50 years. Late in the fall of 1890 this patient was examined for obscure pelvic pain, and a tumor as large as an orange lying apparently in the right broad ligament, intimately connected with the uterus, quite movable, and, as nearly as could be ascertained, of solid nature, was diagnosed. The patient's general health at that time was not good. The growth was giving her very little pain, conse-

quently she was simply acquainted with its existence and advised to let it alone, but to report occasionally for examination. During the next year she traveled extensively in California, passing through the hands of several physicians, and returned to Galveston in the spring of 1892. In February of that year her abdomen was the size of a nine months' pregnancy and rapidly increasing. The tumor was a fluid tumor, presenting a nearly symmetrical appearance and loosely connected with the uterus—this organ could be easily and clearly outlined.

Having carefully prepared the patient for operation, laparotomy was done on February 24; a large cyst and several smaller ones were removed, after ligation of several adhesions and a comparatively long pedicle, the whole procedure lasting less than half an hour. The patient's pulse after the operation was 84. Her recovery was entirely uneventful, with a single exception; this exception furnishing the reason for mention of the case.

After the patient had left the hospital, four weeks subsequent to operation, she developed an acute eczema, which covered chest, abdomen and back, and which quickly subsided under bland applications. The abdominal wound had entirely cicatrized two weeks before, and the patient was using no remedy, either topical or internal. She was in very fair health. There was no evidence of any other local or constitutional affection. She had never suffered from any other skin disease that she could remember, nor has she been so affected since.

The interesting question then occurs, whether this eczema was in any way connected with the original trouble, or with the operation, or with neither. The writer has searched every authority at his command for a similar case without finding any light upon the question.

Mrs. A. M. B., aged 31 years, was seen in May, 1892. She had suffered occasionally for some years with pain in the left iliac region. She was having at this time metorrhagia, and it was for this symptom more especially that she sought relief. Examination revealed a small fluid tumor in the left broad ligament, lying very close to the vaginal wall, well down behind the uterus, and exceedingly tender to touch. A slight rise

of temperature in the evening led to diagnosis of pyosalpinx.

During the month of June this sac was twice aspirated, on both occasions from two to three ounces of pus being withdrawn, with immediate disappearance of fever each time.

Careful attention was given to the patient's general health. July found the sac full and larger than ever. On July 2 an opening was made from the vagina into the sac; the sac was washed out and a large drainage tube left in place. This opening was made by first introducing the needle of an aspirator from the vagina, well back behind the uterus, into the sac; then a small bistoury was passed along the needle, enlarging the opening by cutting backward; a pair of uterine dressing forceps introduced and the opening dilated by expanding the forceps. The aspirator needle was introduced at precisely the same point as on the previous occasions, sufficiently far back to have escaped the bladder in its usual position. There had never been any evidence of perforation of this viscus by former aspirations; yet on this occasion the bladder was perforated. And, indeed, the opening was directly through the bladder, so that the sac discharged first into that organ and then into the vagina.

The drainage tube was kept *in situ*, and the sac washed through it for two weeks, just as long as any discharge came away; then it was withdrawn and the wound from the bladder into the sac allowed to close. The vesico-vaginal fistula remained.

August 1 the sac had again filled and was much enlarged. On August 11 laparotomy was performed. The sac was found universally adherent, very tense and very frangible. After introducing the needle of the aspirator into the sac for the purpose of withdrawing the pus, it was discovered that the instrument had been damaged in the sterilizer and would not work. An attempt to clamp the opening left by withdrawing the needle led to the rupture of the wall of the sac and escape of a portion of the contents, necessitating a free opening into the sac and rapid removal of the pus by sponges.

The adhesions were rapidly broken down; the pedicle, which was large, was ligated off, and the peritoneal cavity thoroughly washed out with Thiersch's Solution. The abdomen

was closed and a straight glass drainage tube left in place for forty-eight hours. The patient's recovery was without elevation of temperature except a slight rise from suppuration in the suture wounds. This sepsis was attributed to the discharge of urine through the vesico-vaginal fistula and a contamination of the dressings, which must have occurred, notwithstanding the greatest care.

Two weeks after operation some swelling occurred at position of ligature, followed by small abscess in the line of the cicatrix of the adominal wound. This abscess was opened, leaving a sinus leading down to site of the ligature. The vesico-vaginal fistula was closed September 21, with no other anæsthetic than cocaine, and the operation entirely successful. The abdominal sinus still remains; it has been dilated and the bottom searched for a ligature with no result.

It has been curretted, injected with iodine, etc., and washed out in the meantime with peroxide of hydrogen, but to no purpose. At present it is treated by most careful asepsis, with the idea that the closure will depend on the absorption of a certain small amount of swelling, which still remains at the site of ligature, and which is gradually lessening.

The patient is strong, free from pain, in good health and performing her usual duties.

The mass removed consisted of the ovary and the tube of that side, the latter much dilated and forming the sac of the abscess. This sac was adherent to the fundus of the bladder and had evidently been so from the beginning, by its weight carrying this viscus down with it into the abnormal position, where it was unintentionally entered by the opening from the vagina. In separating the adhesions of the sac to the bladder great aid was afforded by the finger of an assistant, which was introduced through the vesico-vaginal fistula, and which furnished an excellent guide to the position of the bladder wall, enabling the operator to avoid wounding this organ.

M. M., male, age 68. Admitted to John Sealy Hospital, August 30, with a small penetrating stab wound of abdomen two inches below tenth costal cartilage on right side. He had been drunk and did not know when he had been stabbed. Abdomen tender and very full, giving doughy feel on palpa-

tion. On 31st abdomen very tympanitic, temperature 100°, pulse 104. The stab wound was carefully followed through the abdominal wall layer by layer until the peritoneum was reached, when it was found to be penetrated. The abdomen was then opened and a large amount of blood clots and blood turned out. There was no evidence of wound of intestines or stomach. Two small bleeding vessels in the omentum were tied, the cavity was carefully cleansed and the abdominal wound closed.

The following day patient was very restless and delirious. Bowels moved three times, after saline. Temperature ranging from 100 to 101 degrees.

At 3.15 A. M., September 2, he was sleeping quietly when the nurse left his bed for a moment to look after another patient in the same ward. Upon the nurse's return this patient had disappeared, evidently having gone through an adjacent window which was open on account of the hot weather, and which was at least ten feet from the ground. Once out in the dark, he was lost. Immediate search was made for him, and about 6 A. M. he was seen half a mile from the hospital, out in the edge of Galveston Bay in water nearly up to his armpits, his night-shirt puffed out by the air and floating about him; and he wading along threshing the water with a stick. He was rescued by a skiff and quickly returned to bed.

His temperature at 3 A. M., before the escape, was 100 degrees; after his return it was 97 degrees in the rectum. His abdomen was tympanitic before he disappeared, but as flat as could be on return. He was, needless to say, wet from head to foot. From this experience he reacted quickly, and his progress toward recovery was thenceforward uninterrupted. The delirium continued for ten days and gradually subsided.

L. E. A., male, age 34 years, was brought to John Sealy Hospital from a point in the interior of Texas by his physician, who had been attending him for eight or ten months, and had studied his symptoms very closely.

During the fall of the preceding year the patient had begun to suffer from a pain just under the costal cartilage of the tenth rib of the right side. This pain in the beginning existed only at times and varied much in severity. Later he had

periods when he suffered from very severe pain, necessitating the administration of opiates, and accompanied by violent and continued vomiting. The vomit had never contained blood, grumous nor biliary matter. These periods lasted from three or four days in the beginning to a week or longer, later, and were accompanied usually by slight elevation of temperature. In November, 1891, two such attacks occurred; in December, one; and thenceforward they recurred at varying periods.

The patient's general health improved for the first two or three months in 1892. All the time the pain continued, not so acute, but of a dull, heavy character; relieved somewhat by resting his side against the desk when writing, or by slipping his hand within the waistband of his trousers when he walked, and pressing up under his ribs against the sore spot. Patient had never been jaundiced. On admission to the hospital he was very much wasted; had been unable to retain anything on his stomach for two weeks; rested only when under influence of morphia hypodermically.

In the epigastrium just to the left of the ninth and tenth costal cartilages of the right side was an area of reddened skin, and apparently a well marked dullness on percussion. This dullness was a space approximately as large as an orange. The region was very tender, and palpation difficult. The patient's temperature on evening of 27th was 100 deg., pulse 96.

The patient's critical condition, his manifest gradual decline and the obscurity of his symptoms indicated the only recourse—an exploratory laparotomy. This was done June 28. The abdomen was opened just over the dullness; the liver and gall bladder were found to be normal; no evidence of any gall stone could be discovered. The stomach and pylorus appeared from examination of the exterior to be healthy. To be sure that there was no stenosis of the pylorus (it was slightly thickened), the stomach was opened by an incision a short distance from the pylorus, and the index finger passed easily through the opening. Nothing abnormal could be felt by Dr. H. P. Cooke, who was assisting, or by the operator. This opening was carefully closed by a Czerny-Lembert suture. The right kidney was floating, not misplaced, but sufficiently

loose to permit the hand to be passed behind it from the convex border to the hylus.

Just along the margin of the costal arch, bulging inward from the inner surface of the abdominal wall, was a tumor, long and narrow toward the median line in front, enlarging toward the back; and feeling very much like an accumulation of semi-fluid matter. This was investigated from without the abdominal wall by going through into the swelling and found to consist of muscle tissue. It was afterward determined to be an unusually developed transversalis abdominis.

Unable to find anything which definitely accounted for the patient's symptoms, the abdomen was closed. After coming from under chloroform the nausea returned very violently, with intense epigastric pain and great restlessness. Morphia was necessary frequently to relieve pain. Large enemata of milk, peptonized broth and warm water were given. The patient died thirty-six hours after operation. An autopsy showed the wounds of operation in abdomen and stomach in excellent condition. No evidence of peritonitis. The intestines full of liquid enemata which had not been absorbed.

Immediately within the circle of the pylorus was a depressed cicatricial looking spot of oval shape, three-fourths of an inch one way, one-half inch the other, and one-sixteenth of an inch in depth—the long diameter parallel with the plane of the ring of the pylorus. A microscopical examination of this spot was made in the pathological laboratory of the University of Texas by Prof. Allen J. Smith of that chair. The mucous membrane stopped short at the margins of the depression. The superficial layers of this depression were of fibrous tissue, the deeper layers showing an abundance of cells which, in the opinion of Prof. Smith, justifies a diagnosis of scirrhus cancer, accompanied with a large amount of cicatricial tissue.

To the mind of the operator it is clear that the pyloric growth was responsible for the symptoms of the patient. The effect of the growth was not to cause a permanent organic stricture of the pylorus, consequently there was no narrowing present under chloroform during the operation; but, on account of the situation and the resulting irritation, a spasmodic

stricture was produced before the operation, which reappeared immediately the patient had emerged from the anæsthetic, and this effectually prevented passage of the contents of the stomach into the duodenum, causing the excessive and distressing vomiting.

T. H. age 30, was admitted to John Sealy Hospital August 9, 1892, 11 A. M., with a right indirect inguinal hernia, which was usually kept up by truss. On two former occasions it had slipped down and had been reduced, under chloroform, within a few hours after escape. About 8:30 A. M. on morning of admission patient had jumped to cross a wide ditch, had slipped and fallen, and in the fall the hernia had escaped, forming a larger tumor than ever before. It had, according to the patient, never remained unreduced so long. No attempt at reduction, other than that of patient, had been made prior to admission.

He was placed with his hips elevated, thoroughly chloroformed, and gentle firm taxis made for twenty minutes without result. He was left in above position, the hernia wrapped up with cloths dipped in ice water until 2 P. M. At that hour chloroform was again administered and taxis made as before, for ten minutes without accomplishing reduction. The hernial sac was then opened. The contained small intestine (about twelve inches) was found intensely congested, with frequent extravasations under the peritoneal coat. A constriction at the internal ring was severed; the circulation in the bowel was noticed to be quickly restoring itself; the bowel was reduced; the sac ligated; the parts freely dissected so as to display the conjoined tendon, the external and internal pillars. The conjoined tendon was sutured to the shelving edge of Poupart's ligament and to the external pillar with heavy catgut, the cord being left near the spine of the pubis.

The internal pillar was sutured with silk to external pillar, the same line of sutures, including the cutaneous tissues, etc. The patient recovered without an elevation of temperature or any unfavorable symptom. He was permitted to sit up after four weeks, and advised to wear a light truss for six months. At this date (February 8) his hernia has shown no evidence of recurrence. He still wears a very light truss, which will be discontinued during the week.

POST-PARTUM HÆMORRHAGE.*

By J. D. TRAHAN, M. D., LAFAYETTE, LA,

My excuse for reading a paper on post-partum hæmorrhage is, that if we take up medical literature we find that very little has been said in the last few years upon this all-important subject to those of us engaged in that branch of our profession, and I feel sure there is not one here but what must have felt, more or less, the need of additional information, and at a time when mostly wanted.

This accident may well be classed among the dreaded ones of human parturition, more especially among the multiparous, for the reason that we find in that class of patients evidences of worn-out nervous energy, a relaxed condition of the muscular system, and more particularly in the uterus after repeated child-bearing at short intervals of time; when this organ seems to have lost a great deal of its contractile power from sheer exhaustion. But frequent and fearful as this accident is, I believe it could, in the vast majority of cases, be obviated by proper management of the latter part of the second stage and the whole of the third stage of labor. If the pathology and means of prevention of this dreadful accident were more thoroughly considered, I believe that post-partum hæmorrhage would be very much less frequent than it is. An affection, I should say, that has heralded hundreds of victims to the tomb would lose much of its terror to the parturient women as well as to the obstetricians.

Now, gentlemen, let us consider a case in due process before us. The second stage is nearly ended, but we have noticed all along that the pains and contractions of the uterus were rather irregular and inefficient; the patient complains, perhaps, of feeling worn out—she implores our help. We make an examination and we find the os quite dilated and the head is well down in the inferior strait. We now proceed with what should be done in every case of labor as anxiously as though post-partem hæmorrhages were confidently expected. We give $\frac{3}{4}$ fl. extr. ergot; in a few moments the child is born; ligate and divide the cord and pass the child to a nurse.

* Read at the meeting of the Attakapas Medical Society, held at Lafayette, La., December 6, 1892.

As usual, we always have in the room some few old women attendants that are admiring the baby and finding resemblance; at this particular juncture we should not allow ourselves to do likewise, but see that our patient's vital current is not ebbing. Notice your watch, for it will be about fifteen minutes before uterine action is resumed. Let us place our hand over the uterus to see whether or not it is contracted; and, if so, see that it does not enlarge. We will not bear too hard and sink our fingers into its walls, favoring thereby irregular contractions and, perhaps, induce inversion, nor should we alternately compress and then relax our hold, making thereby a regular suction emptying the uterine sinuses, but simply support it and make sure that it does not enlarge. In a short while we feel the uterus harden; now we should grasp the fundus uteri as per Cr  d  's method, press it moderately downward and backward in the axis of the superior strait, and by this manner the placenta will be expelled through the vagina and vulva into the bed.

We should ascertain that the entire membranes have come away with the placenta. We will continue to hold our hand over the uterus to see that it is contracting. After half an hour the binder may be put on with a compress over the uterus, and in about an hour longer, if the feet are warm and the pulse under a 100 per minute, the patient may be considered as doing fairly well. In this case we have not extracted the placenta, but extruded it. As extraction is considered a frequent cause of uterine inertia, and as inertia is a great cause of flooding, it should not be attempted unless it be in exceptional emergencies.

Extrusion when not impracticable should always be preferred and will succeed, if skilfully done, in the great majority of cases. But it may be, as it has often fallen to my lot, that an ignorant midwife has been trying her "dexterity" by pulling on the cord until she has arrived at the conclusion that she is not equal to the task, or it may be that the patient is of the h  morrhagic diathesis, and then instead of the womb remaining contracted, it begins to enlarge until it has filled and distended the uterine cavity to its utmost; it is then soft and flabby. The patient, perhaps, complains that the room is dark; she calls

for air, gasps for breath, and perhaps she faints. Now gentlemen, what is to be done? Time is precious, there is no time for reading up, no time for counsel; we must act deliberately and promptly. The first thing to be done under these circumstances is not to get confused, for you look around and see the attendants badly frightened and have their eyes upon you; our patient is apparently dying, and she will die if she is not promptly and decidedly treated. Then remember there are only two ways given under the heavens and among men whereby this hæmorrhage can be checked. The first is decided and firm uterine contraction, and second the formation of thrombi in the uterine sinuses.

Our object, then, should be to obtain contraction, and for this we are told to give ergot in large doses and frequently repeated until a few doses are given; but just now, when we are particularly anxious and desirous that our medicines administered should be retained and promptly absorbed, we find ourselves sadly repulsed and disappointed; the stomach is exceedingly irritable and rebellious, owing to blood loss and consequent anæmia of the brain. What should we do? Give ergot hypodermically. It is more certain to be carried into the circulation. We should give it freely and unsparingly; and we now proceed to remove the placenta. But we can not always wait for the effect of ergot; we should, therefore, resort to other means known to excite muscular contractions. Cold, locally applied, is oftentimes followed by good results. We therefore hurriedly clear the uterus, introduce our hand and scoop out the blood clots and pass a piece of ice (if any at hand) into it, not in the vagina, but well up into the uterus itself; and should there be none at hand, inject cold water with an ordinary family syringe. Frictions, and kneading the organ through the relaxed abdominal wall, can also be employed with a reasonable prospect of doing good.

Assistants, of which there is generally plenty, can throw open the windows and doors in order that the patient may have plenty of cool and fresh air. The pillows may be taken away and the head lowered that the brain may have the benefit of what blood is left. Hæmorrhage will now be controlled, and the womb firmly contracted. Failing in this, however, the

hæmorrhage continuing, the patient is shivering and complains of feeling cold. We now, of course, use no more ice or cold water injections; but, with a proper syringe, we inject the uterus with hot water at a temperature of about 110 or 115 deg.; the womb now contracts and the flooding stops; we also give hypodermically sulphuric ether as a diffusible stimulant, to which a few drops of tinct. digitalis and nux vomica are added.

Now, gentlemen, we have done all this, and still our patient bleeds. Have we exhausted all means and are we at our wit's end? No, not yet. We are now supposing a case in its worst form. The patient is bleached and corpse-like, she has lost every drop of blood she can lose and live, and still she bleeds. We then proceed to compress the abdominal aorta against the lumbar vertebræ just above the bifurcation, and even at this critical stage we should not allow ourselves to be excited, for we know that we are masters of the situation, we have determined not to let our patient die. Should we have any creoline gauze or other properly prepared material, with the use of a Sim's speculum we firmly tampon the uterus, or else we call up our old reserve that will not fail and can not fail. With a syringe we inject a solution of persulphate of iron in the proportion of one to four parts of water. Carry the canula in the uterus and irrigate thoroughly all over its surface. We now feel the uterus contract upon itself firmly under this powerful hæmostatic and the hæmorrhage stops, not to return. We have at last successfully rounded the Cape of Good Hope, the storm region is passed, our patient is safe; we have wrestled with the grim master, the battle was fierce, but the victory is ours.

Proceedings of Societies.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON ORTHOPÆDIC SURGERY.

Stated meeting, February 17, 1893, W. R. Townsend, M. D., chairman.

Dr. Royal Whitman presented a boy four years of age, to illustrate a very exaggerated type of flat-foot characterized by great laxity of the ligaments, and by marked deformities of the bones, apparently of congenital origin.

Dr. Whitman also presented a case of *pes cavus* or non-deforming club foot occurring in a girl of eight years, the result of a subacute anterior poliomyelitis. He presented this case to illustrate the extreme sensitiveness of the contracted tissues in the sole of the foot.

FLAT-FOOT; ITS CAUSE AND TREATMENT.

Dr. Newton M. Shaffer read a paper with this title, and exhibited several illustrative cases, as well as a new brace and anew traction shoe.

Dr. Shaffer said that he would show in his paper that in the early history of flat-foot there is a certain amount of shortening of the gastrocnemius muscle, and that later, as a result of certain traumatisms occurring in the tarsus, there is a true muscular spasm of the abductors of the foot, and that then the abductor action of the two peronei comes into play, and materially interferes with the reduction of the deformity. As an illustration of this he presented the first case, a boy seventeen years of age, who had had symptoms of flat-foot for a considerable time. The right foot, which was the first one affected, began to show symptoms of the trouble about one year ago; the left foot had only caused inconvenience during the last six or seven months. In the right foot there was a very marked resistance of the peronei, and any attempt to adduct the foot was materially interfered with by the action of those muscles. While there was a certain amount of flexion in the direction of abduction of the foot, there was none in a direction which would tend to bring the foot into the normal plane of the tibia. In the foot last affected there was no resistance on the part of the abductors, but on extending the knee fully, and bringing the tarsus into the same plane as the long axis of the tibia, an attempt to bring the foot into a straight position met with no

resistance from the two peronei, but there was found an absolute resistance from the gastrocnemius muscle.

The second case was a girl about eighteen years of age, who had complained of the symptoms of flat-foot for only three weeks. They were the same as in the first case, but not so severe. The anterior-posterior flexion was not normal, and there was a vicarious motion of the anterior portion of the foot, occurring at the medio-tarsal joint, which if not carefully studied would lead one to suppose there was considerable flexion at the ankle joint. This patient also illustrated the fact that spasm of the peronei muscles occurred late.

In a third patient, on placing the foot in the straight (lateral) position so that the tarsus was fairly under the axis of the tibia, the shortened gastrocnemius again offered resistance. With the foot in its abducted position, there was a considerable false flexion, but when the lateral malposition of the tarsus was corrected, and an attempt made to produce true flexion at the ankle, one was met with a decided resistance at the gastrocnemius, so that the foot could not be flexed beyond 90 deg.

The fourth case was a young boy, who illustrated some important foot conditions following poliomyelitis anterior. On the right side the tibialis anticus had been paralyzed; a shortened gastrocnemius had followed, with also a slight contraction of the two peroneal abductors. As in the previous cases, any attempt to secure true ankle joint flexion after reducing the abduction resulted in the production of flat-foot at the expense of a resistance which could be definitely located at the tendo Achillis. In the left foot almost exactly the reverse conditions were found. The entire post-tibial group had been paralyzed, and the flexors were unparalyzed. The result was a calcaneo-cavus. The os calcis had been drawn forward by the unopposed flexor and plantar muscles, and the conditions found were exactly the opposite of those found with a shortened gastrocnemius. In short, in these two conditions above described, the os calcis became a sort of patella moving upward and backward about the ankle joint centre when the gastrocnemius was shortened, and moving downward and forward when the gastrocnemius was paralyzed. There being but little motion between the os calcis and the astragalus, and motion at the transverse axis at the ankle joint (the distal part of the os calcis, the superior articulating surface of the astragalus, and the medio-tarsal joint), any muscular resistance blocking true flexion at the ankle joint must be lost at the latter point, as Dr. Shaffer showed, in fine carefully prepared diagrams, and with a steel model of the human foot, arranged with elastic bands.

Other cases were shown which illustrated the result of the

shortened post-tibial muscles, flat-foot being produced in each instance.

Dr. Shaffer also showed the brace which he employed and recommended, in which the ankle piece of the support was so placed as to make the patient walk entirely on the outer side of the foot. That the brace really succeeded in accomplishing this was proved by a pair of shoes which he exhibited, and which showed the soles worn off completely on the outer side. By means of this brace, one can to a very great extent produce a physiological rest of the plantar tissues without placing a pad or other support underneath the arch of the foot. Since the patient had been wearing this apparatus he had been able to resume his work, and consequently the treatment was continued without interfering with his occupation.

DISCUSSION.

Dr. Royal Whitman called attention to the fact that in assuming that primary contraction of the calf muscles was the usual cause of flat-foot the reader had added one more theory to the etiology of this very common affection. Every muscle of the foot had now been accused of either primary weakness, or spasm, or both, by different writers on the subject. The reader had not made it clear why this primary contraction affected particularly those whose feet were subjected to overwork, as nurses, bakers, printers and the like. Again, in demonstrating this contraction the reader had by slightly adducting the foot depressed its outer border, and had thus completely cut off the motion in the joint between the os calcis and the astragalus. Under such conditions a limitation of flexion could be found not only in flat feet, but in normal feet as well. He would not accept a theory which demanded a causeless and unexplained contraction of muscle as a starting point. On the contrary, he regarded the cause of flat-foot as much more simple.

The flat-foot was in a greater or less degree a dislocated foot. The spasm, contraction, or weakening of muscles, the weakening of ligaments, the inflammation of joints, the changes in bones were results and not causes. The etiology of the affection was, he believed, in most instances, a disproportion between the weight to be sustained, or the work to be performed, and the strength of the supporting structures. This disproportion might arise in the foot as from inherited weakness or malformation; acquired weakness as the result of gout or rheumatism, the result of improper shoes, or improper attitudes, or the work might be too great, as in constant standing, or the foot might break down from simple overwork, or as a result of injury. Treatment conducted on the theory that the disloca-

tion must be replaced and must not recur, that all contracted parts must be over-stretched, so that the normal relations of the foot may be restored, and its motions perfectly carried out, that faulty attitudes must be avoided, and that weakened muscles must be strengthened by appropriate exercise, was almost invariably successful. He could not, therefore, on surgical grounds approve of a treatment which allowed the dislocation to remain unreduced, although the leg braces used by the reader to throw the weight to the outer border of the foot were doubtless efficacious in relieving pain.

He considered the paper a valuable contribution to the literature of the subject as calling attention to the calf muscles as a group which might require forcible stretching in the preparatory treatment of flat-foot. The appliance exhibited seemed to carry out its purpose admirably.

Dr. V. P. Gibney said he would like to see demonstrated the contraction of the gastrocnemius, for he believed with Dr. Whitman that it was not primary. The proof of the correctness of a method of treatment would be the percentage of cures and the ease with which it is carried out. His own hospital patients with flat-foot were mostly those of the painful variety where there was much spasm, yet these cases were nearly all relieved very promptly by over-correction under an anæsthetic. He could not at that moment say just how many relapses there had been, but they were certainly very few.

Dr. S. Ketch said that he understood the author did not intend to include all the different forms of flat-foot, or to account for all cases by the etiology described in the paper. The condition of the gastrocnemius muscle described in the paper was almost constant in classical cases of flat-foot. At the first meeting of the American Orthopædic Association there was a discussion on the etiology of flat-foot, and Dr. Shaffer called attention to the shortened condition of the gastrocnemius muscle. He did not understand that the author claimed that the condition of the gastrocnemius muscle was due to a trophic disturbance of the brain. He had been able personally, with the old form of the extension-shoe, in dispensary practice, to materially relieve the pain of flat-foot—an important matter with working people. Where there are so many theories about the etiology of flat-foot, we should not be satisfied with a working theory alone; the cause of each should be studied. He had seen cases where the superincumbent weight did not account for the flat-foot; indeed, he could recall many instances where it was present in children who had never put their weight upon their feet. Certainly this theory of superincumbent weight did not account for the flat-foot of poliomyelitis. He was surprised at the lack

of unanimity of opinion in regard to the almost constant presence of contraction of the gastrocnemius muscle. In 1887 he had himself argued against this contraction, as a cause of valgus, but a more extended experience had led him to retract these statements, and to heartily endorse the views expressed by the author.

Dr. L. W. Hubbard said that his experience at the New York Orthopædic Dispensary and Hospital also confirmed the statement that in almost every flat-foot there is this limitation of flexion. There may be, however, limitation of flexion at the ankle joint, and still no flat-foot until weakening of the plantar ligaments occurs, and then flat-foot is suddenly made manifest. The cause of this limitation has not yet been explained. The fact that relief has been gained by treatment directed against this condition seems to indicate that this is a decided element in the production of the deformity.

Dr. Halsted Myers thought the observation of Dr. Shaffer that feet with short tendo Achillis are apt to develop flat-foot, was especially valuable as indicating how we could apply the "ounce of prevention" treatment to those cases before flat-foot occurred. In the well developed cases the short posterior tendon, whether primary or secondary, demanded treatment fully as much as the less powerful anterior and external muscles.

Dr. R. H. Sayre said that he did not doubt that contraction of the gastrocnemius was frequently met with in flat-foot as well as in many cases of varus. If it be sufficient to prevent the lowering of the heel and the foot is brought beyond a right angle, it is at the expense of twisting the medio-tarsal joint either inward or outward. He did not think the author's explanation of the mechanism by which flat-foot was produced was a correct one, although the shortening of a contracted gastrocnemius must be overcome before a flat-foot could be cured, and it was easy to demonstrate on the author's manikin that the weight alone might cause spreading of the plantar arch without any contraction of the heel-cord. In the infantile varieties of flat-foot and in some rachitic forms of flat-foot, we find these contracted gastrocnemii, but it is not necessarily an etiological factor in all cases.

Dr. Whitman in reply to Dr. Myers said that in the operation of over-correction under ether, as recommended by him for rigid flat-foot, all contracted tissues were forcibly over-stretched; the foot was then forced into extreme equino-varus, not only because long continued over-stretching and rest of the contracted muscles was assured, but because this position forced the bones of the foot as far as possible into a position

opposed to that which had been long assumed in the deformed foot. Contraction of the tendo Achillis never followed such temporary confinement with the plaster bandage.

Dr. Shaffer, in closing the discussion, said that he had specially avoided any allusions to the cause of the shortened gastrocnemius because he thought very little was known about it. In his experience he found in every case decidedly imperfect flexion of the ankle joint before there was any muscular spasm of the peronei, or pain in the tarsus, when the patient had been seen in the early stage. In fact the shortened gastrocnemius was the only noticeable feature except elongation of the plantar tissues. He considered a shortened gastrocnemius absolutely essential to the production of flat-foot, and he was satisfied that the gastrocnemius was not "weak;" it was a shortened muscle, but whether or not due to the arrest of development which accompanies non-deforming club-foot he could not say. He thought, however, he had demonstrated it to be a mechanical fact that if the heel be slightly raised, and the plantar tissues weak, flat-foot is the result; but if the plantar tissues are strong enough to bear the weight non-deforming club-foot is produced.

The first apparent stage of the classical flat-foot in perhaps ninety-five out of every hundred is characterized by a shortened gastrocnemius muscle, and this can easily account for all the subsequent signs and conditions found in flat-foot. He did not agree with Dr. Whitman that the apparatus exhibited on one of his patients produced trauma of the plantar tissues; in his opinion, traumatism was produced by any pad or spring placed under the arch of the foot. There is no trauma to the plantar tissues when the foot is placed in an apparatus where the weight of the body is thrown obliquely through the tarsus. In examining for flat-foot, he simply attempted to restore the parts to a condition where a normal test can be made of the transverse axis of motion at the ankle. He did not adduct the tarsus. The best opportunity to study the conditions which produce flat-foot is where the muscular conditions are disturbed, as in infantile paralysis. The principles expounded in his paper he taught as long ago as 1882 in his lectures at the University Medical College.

GYNECOLOGICAL AND OBSTETRICAL SOCIETY OF BALTIMORE.

The president, Dr. B. B. Browne, in the chair.

Dr. Hunter Robb read an abstract of an article by Prof. Gusserow on "Ascites in connection with Gynecology."

In the *Archiv. für Gynecologie* for 1892, Prof. A. Gusserow,

of Berlin, has an interesting article on "Ascites in connection with Gynecology," of which the following is an abstract:

A high grade of ascites has often been observed occurring in connection with affections of the genital apparatus or of the peritoneum, which seem to occur by preference in women. In these cases at first even the skilled diagnostician can not say anything more than that he has a general ascites (non-encapsulated). There is a lack of the symptoms which occur in ordinary ascites; there is no œdema in other parts; for instance, of the legs, the abdominal wall, or of the outer genitals. A patient often comes to us like a skeleton, with the exception of a very prominent abdomen, which makes us think at once of an abdominal tumor, in the modern sense of the word—*i.e.*, a new ab-growth. A special characteristic of this kind of case is the absence of all the ordinary factors, one or more of which are so often found to have given rise to ascites. So then in the first place, a careful examination must be made for diseases of (1) the circulatory apparatus, (2) the liver, (3) the kidneys; and only those cases of ascites in which such etiological factors can be positively excluded come, properly speaking, into the domain of gynecology; and it is only these and none others that Gusserow is discussing. Most gynecologists are now agreed upon the best method of handling such cases.

Unfortunately, the ordinary practitioner is too apt to follow the older method, a circumstance which sometimes proves very unfortunate for the patient. He still clings to the idea that an attempt should be made to ascertain the cause of the ascites by means of a puncture, or what is worse, he is apt to make the treatment consist in further punctures and to continue these till the death of the patient. Puncture is, in my opinion, in every way inadvisable. It is true that we, in common with other gynecologists, for many years taught that puncture was always necessary for the diagnosis for an abdominal tumor. This idea they have now given up, and we consider it quite as absurd to make a puncture for diagnosis in the cases of general or "free" ascites. This new doctrine I have taught for years, and the same holds good for tapping to take away the greater part of the fluid.

It used to be the custom to make a puncture with a Pravaz "syringe" and draw off a little fluid, have it examined chemically and microscopically, in order to make a diagnosis of the kind of ascites and of its probable origin. Although much work has been done on the subject, there are many cases, and especially nearly all of these cases of "general ascites," which we are discussing now, where such an examination will give us no information at all. Better than this is tapping for the removal of the greater part of the fluid, since we thus get

a better chance for palpation of the abdominal and pelvic organs, and may possibly be able to detect the cause, which was concealed by the amount of the fluid. This "chance" of making a diagnosis frequently led to the adoption of this treatment, which, as we said, was often not the best for the patient. The reasons against this method are: (1) The uncertainty of being able to make a diagnosis, even when the fluid is drawn off; (2) the faint chance, even with the best asepsis at our command, of setting up a septic process. (This latter danger has now, it is true, been reduced to a minimum, but we have, nevertheless, seen cases of erysipelas and septic peritonitis from tapping.) (3) The liability of injuring vessels and of consequent internal bleeding; (4) the impossibility of drawing off all the fluid by tapping, and the almost certain return of the fluid, which perhaps will necessitate tapping again and again.

I have given up both the puncture and tapping and prefer to make an incision about 6 cm. long, then empty the abdomen of the fluid, and inserting the finger, find out what is the local cause. One is then at once able to decide for or against an immediate or a future operation. If a radical operation is not to be done, we have at any rate drawn off all the fluid. The cases are divided into groups. To the first group belong cases of "general" ascites as a consequence of so-called "tuberculous" peritonitis. This form appears mostly in young people. No lesion in the heart, kidneys, or liver is demonstrable and no signs of tuberculosis are anywhere found. On laparotomy one finds numerous nodules of a gray, reddish color both on the visceral and parietal surface of the peritoneum. Some of these cases, as it seems to us, are not cases of tuberculous peritonitis in the modern acceptance of the term. We would prefer to call them cases of "peritonitis nodosa." The first case given was observed by me twenty years ago, before the tubercle bacillus was discovered. The patient was quite young, twenty years of age; no signs of phthisis. There was a high grade of ascites. Patient had been tapped several times. Laparotomy performed, the fluid evacuated and the before mentioned nodules were found. Seeing the nodules I made a diagnosis of tuberculosis and gave a bad prognosis, and the patient—got well. In the second case laparotomy was performed, the fluid was evacuated and one of the nodules cut out. The central portion of the nodule was caseous, but no giant cells were found. (Tubercle bacilli had not been discovered and were not looked for.) The patient recovered. The third case, which was operated upon in 1892, was somewhat similar. The microscopical examination showed small-celled proliferation with a rich blood supply. No giant cells, no tubercle bacilli. In any of these three cases tapping would

have been of no avail, for it would not have been possible to make a diagnosis by palpation except by exclusion after the fluid was drawn off, and the diagnosis could only be established by opening the abdomen and cutting out one of the nodules for examination.

The second group consists of cases where the ascites was due to papilloma of the ovaries.

Papilloma of the ovary, or superficial papilloma of the ovary, consists of an abundant growth of connective tissue villi, which comes from the surface of the ovary, while the ovarian stroma itself is either found to be thickened or is nearly normal. These cases are not always distinguished from those rare cases in which the papilloma has burst, and a part of it has grown free in the abdominal cavity. The characteristics of superficial papilloma of the ovary are, (1) both ovaries are generally involved, (2) they cause a high grade of ascites, which is liable to return again after tapping, (3) they are generally too small to be palpated, even after tapping.

The first observation of this kind was published by myself and Eberth in Virchow's Archiv. No. 43, 1868. Patient, 34 years of age, had a high grade of ascites for a year and a quarter. Had been tapped several times (in Billroth's clinic among others). No reason for ascites discovered. Umbilical hernia developed and burst, and the patient increased the opening herself and let off the fluid. Finally the hernia became very large. A convolution of intestine had come out through the hernia, and when the patient was seen, most of the small intestine lay outside the abdomen and showed signs of discoloration. Operation for hernia. Rupture of gangrenous portion of intestine. Death. Post-mortem showed: papilloma of the ovary. (He also adds other cases.) These cases of rare disease of the ovary ought to convince us that where we have ascites from some unknown cause in the abdomen we ought not to limit ourselves to puncture, in fact we ought not to puncture at all.

In none of them was it possible to diagnosticate the nature of the cause till the abdomen had been opened. In one of them, where puncture had been made before, and bloody serous fluid evacuated, we might have been led to think of carcinoma of the peritoneum, and been unwilling to operate. This admixture of blood, as a matter of fact, was a result of the puncture. In two of the cases death unfortunately followed the operation, but this must be attributed to the exhaustion of the patient by the frequent tapplings. In another case death was caused by septic peritonitis. Otherwise we feel sure that the patient would have been cured, since we have no instance of recurrent papilloma of the ovary where it has once been thoroughly excised.

To the third group belong those far more common cases of ascites due to carcinoma of the ovaries and the peritoneum. Here it might be asked: "Is not incision unnecessary? Here we can feel even a nodular tumor after puncture. Is it not sufficient to puncture in order to make the diagnosis?" However, again we should employ incision. First, because we can never be otherwise sure that the growth is cancerous. Secondly, because only by this means can we decide whether (if there is carcinoma) the ovary or uterus ought to be removed, as it is the rule to extirpate cancerous ovaries unless the peritoneum is involved; and every carcinoma must be removed, if it is in healthy tissues. If there is carcinoma of the ovaries, then by incision we can tell whether or not the peritoneum is affected, and that can only be discovered by laparotomy. It will be objected that in malignant disease laparotomy has sometimes hastened death. This by no means always occurs, and against it we can put, first, the certainty of diagnosis; secondly, if the tumor is benign, a timely operation and recovery; and to these we may add that where the tumor is malignant, a laparotomy sometimes hinders its progress, and even without further operation life is prolonged.

These cases fall naturally into three subdivisions, (1) those in which the malignant growth could be removed (with ovaries). It must be remembered that we are not talking now of operations for malignant growths in the abdomen in general, but only of those in which general ascites was the characteristic symptom. Out of three cases two recovered completely, the third died later of multiple sarcomata. In the second subdivision come those cases in which the malignant growths could not be entirely removed.

The first case has the following history: M. G., aged 20, admitted August 18, 1891. Primipara. Three months before entrance she had a great deal of pain in the abdomen, which obliged her to stay in bed. Was in bed four weeks. Before entrance she noticed a swelling, with no pain, but shortness of breath. The abdomen measured 110 cm. General ascites. No tumor felt by palpation on vaginal examination. Laparotomy, August 18, four to six litres of ascitic fluid removed. Tumor size of first on right side of uterus in layers of broad ligament. Mass adherent. Removed with difficulty because the tumor was of a friable, medullary material. A great deal of hæmorrhage followed. Left ovary healthy. Diagnosis, spindle and round cell sarcoma. Patient recovered from the operation, but died of peritonitis without ascites and of marasmus after seven months. Autopsy, general sarcoma of peritonoum, omentum, retro-peritoneal lymph glands, retro-sternal glands.

The next case, one of carcinoma not connected with genital apparatus, but adherent to the intestines. Removed. Patient left hospital completely well. She was lost sight of. Of the five cases in this category, in all which a portion of the growth was left in the abdomen, three died, not in consequence of the operation, but on account of the rapid development of the malignant growths. Two got well (one a woman of 75). What became of these cases ultimately is not known; any way, their lives were prolonged by laparotomy.

To the last subdivision belong those cases of ascites where no attempt was made to remove the tumor, but where the abdominal section was made for the sole purpose of evacuating the fluid, of five cases two died and three got better for the time being.

These cases show that for drawing off the fluid laparotomy is often better than puncture. The fluid can be so much better removed in this way, a diagnosis can be made, and we know with absolute certainty whether an operation is indicated or not.

Lastly, we must mention cases of general ascites caused by benign diseases of the genital apparatus. The first case was a woman, aged 57, nine children, came into the clinic August 4, 1890. Menopause one year ago; since that time had remarked a swelling in the abdomen, which caused her no particular inconvenience. For the last three weeks rapid increase in swelling, causing a feeling of tension, pain in abdomen and back, with pain on micturition and prolapsus vaginæ (abdomen 103 cm., from ascites). No tumor felt in abdomen; nothing discovered in the other organs. Laparotomy, August 6, 1890. Color of fluid yellow; hard tumor fastened to left cornu of uterus, easily separated from it. Right kidney a little out of place. The uterus was attached to abdominal wall. Tumor proved to be fibroma ovarii sinistri.

Recovery. Vagina replaced. Even operation did not show the reason for so much ascites.

By tapping, of course, we could not have discovered the real nature of the tumor causing the disease. We might indeed have felt the tumor, but could not have told about its malignant or non-malignant character. In another case belonging to this category we could not have had any idea of the nature of the disease by tapping. By laparotomy we were able to see plain indications for removal of the tumor, and were consequently able to cure the patient.

Professor Gusserow in this article expresses, we think, the views of most of those of us who have had much experience in abdominal surgery. With our present technique, even

were the advantages to be gained by such a procedure far less than they really are, we need not hesitate to open the abdomen instead of making a puncture. When the general practitioner meets with a case of ascites where all implication of the circulatory apparatus, the liver and kidneys, have, once for all, been definitely excluded, it would certainly be well for him to call in the specialist before adopting the "puncture" method. Our own experience fully bears out the futility of attempting to arrive at a certain diagnosis in every case by examination (chemical and microscopical) of the fluid which has been aspirated; the only certain way is to use the hand or the eye, or, if possible, both. Again, we have seen more than one case which has come to autopsy where the patient had died after numerous aspirations and where the condition of things had led us to believe that a timely operation might have at least much prolonged the patient's life, even if the disease could not have been thoroughly eradicated. In these cases it seemed that valuable opportunities had been lost, and since an abdominal section not only gives the patient the best chance for complete recovery, but when employed as a palliative measure is more efficient than frequent tapplings, it is in almost every case the better method. With respect to the "Peritonitis Nodosa," of which Gusserow speaks, it does not seem clear to us that these were not instances of peritoneal tuberculosis, and if this were the case the success which attended the operations, and which we have seen confirmed in our work, would only go still further in proving his proposition.

Finally, in these days, when in both medicine and surgery we are all striving as much as possible to avoid working in the dark, and we wish to treat our patients for the disease they really have, and not for a hundred and one others which they might possibly be suffering from, the advantages of an absolute diagnosis can hardly be overrated.

Dr. J. Whitridge Williams: I think we should take the case of Dr. Ashby's as a text to teach us to examine carefully for pelvic growth in all cases of ascites where heart and liver troubles are excluded. If we find ascites associated with a pelvic tumor the rational treatment is laparotomy and removal of the growth. The operation is very little more dangerous than puncture and is more satisfactory. Ascites is often due to tubercular peritonitis, papillomatous growths on the surface of the ovary, and solid tumors of the ovaries and tubes, both malignant and benign.

Dr. B. B. Browne: These cases recall a case which I saw about three years ago of large accumulation of ascitic fluid in which it was quite impossible to make out any pelvic

tumor. Kidney and heart diseases were excluded and the conclusion was come to that the ascites must be due to some intra-abdominal growth. An abdominal section was made, and after the evacuation of several gallons of ascitic fluid a papilloma of the ovary was found and removed. I saw the patient about three months ago; she was perfectly well.

Dr. Thos. Opie: I had a case of dropsy associated with large uterine fibroids. I made an abdominal incision with the intention of removing the fibroids, but finding that impracticable, the abdominal cavity was thoroughly sponged out and the wound closed. The patient was very much improved.

In many cases the simple opening of the abdominal cavity seems to at least temporarily relieve the patient, but the field is so new that we can not assert positively just what permanent good can be attained by these operations.

Dr. Wm. E. Mosely: Dr. Ashby's case recalls one which I reported fully some time ago. The patient had ascites, and I aspirated her twice. Both times the abdomen rapidly refilled with fluid. I then opened her abdomen and removed two papillomatous growths. Three years have now elapsed since the operation; there has been no return of the ascites, although the growth has returned.

Dr. B. B. Browne: The question which is brought out most prominently is the propriety and advisability of an exploratory incision in those cases of ascites in which (heart, liver and kidney diseases having been excluded) no intra-pelvic tumor can be felt.

Of course, where the tumor is large enough to be mapped out, the accumulation of ascitic fluid no longer obscures the diagnosis or interferes with any operative procedure which would be called for were no fluid present.

WILLIAM S. GARDNER, *Secretary.*

613 *Park Avenue.*

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COLLABORATORS:

DR. F. W. PARHAM.

DR. H. W. BLANC.

DR. A. W. De ROALDES.

DR. R. MATAS.

DR. JOHN DELL'ORTO.

Editorial Articles.

OUR LEPROSY INIQUITY AND THE STATE MEDICAL SOCIETY.

It is unnecessary for us to state that leprosy exists in Louisiana. Our unfortunate State has acquired an unenviable fame as a lingering spot for the pest, and also for criminal indifference in the management of the disease. Our own sentiments have already been fully set forth in the pages of the JOURNAL, and it would be a waste of space further to particularize in regard to the alarming manner in which lepers are permitted to walk about the streets of the city, attend places of amusement, eat in public eating-houses with other people, etc.

The indifference of our people to leprosy must be incomprehensible to outsiders. Laymen can be excused, for they know nothing about the disease; but the indifference of the medical profession is in the highest degree reprehensible. The people look to their medical advisers to devise practical methods of stamping out a plague. Formerly, medical men could shrug their shoulders and say that leprosy was an exotic in Louisiana, and that the victims of the disease were imported; but that lame excuse is no longer available, for the investigation of a prominent dermatologist have shown that *leprosy has become*

an indigenous disease in Louisiana, and we, as medical men, have a moral responsibility in the premises which it would be unmanly to shirk.

Every physician in the State is in favor of isolating the unfortunate lepers; but each man, as one individual, can not accomplish anything. There is only one body that is capable of voicing the sentiments of the profession, and that is the State Medical Society. The Board of Health should have taken the matter up long ago, and clamored for an efficient method of dealing with the disease; but the energies of the Board have been directed in other useful channels. The Board having failed to take the initiative, which of right belonged to it, the State Medical Society would not be guilty of a breach of courtesy in appearing, through representatives, before our State Legislature and endeavoring to secure the passage of a well digested bill that will embody the fruits of the experience of other nations.

To permit existing arrangements to continue without at least a protest, would be to manifest a most culpable callousness or indifference to the public welfare. Every physician, as an enlightened and patriotic citizen, should feel that it is his *duty* to provide for the sequestration of lepers. As the recognized mouthpiece of the profession, will the State Society, at its meeting on May 9, do its plain duty? The leprosy question is not away up in the clouds, out of our reach; it is at hand, right here. Our Society has an opportunity to demonstrate that it is a modern institution, capable of dealing with sanitary questions in an intelligent manner.

KEELEY'S CURE.

For lo! these many moons have our daily papers groaned beneath the weight of news inflicted upon along-suffering public concerning a widely known "system" of treating drunkenness. From the small town of Dwight, Illinois, came forth the glad tidings that habitual drunkards could, by means of a certain remedy injected hypodermically, be relieved entirely of dipsomania, and also of cash at so much a squirt. Dr. Leslie E. Keeley had discovered a remedy that could do all of that.

“What was the remedy?” It is not meet to cast pearls before swine, so the narrow, bigoted, prejudiced members of the most liberal of liberal professions were not vouchsafed a definite reply to that simple question. Brother Keeley knew too well the power of mystery over the human mind, particularly of neurotics; and, as alcoholic subjects may safely be put in that category, it is easy to see how “suggestion” might play an important part in the happy results obtained in some cases by our erring brother.

Medical men have often been reproached for their lack of knowledge of practical, every-day matters—in other words, they were supposed not to have any sense. How baseless this assumption is has been clearly shown by Keeley. He “worked” the press most skilfully, and in Brooklyn one of the most famous preachers of the country took the chief part in a public demonstration in honor of the famous Illinoisian. At the birthplace of the “system,” an “institute” arose; and in time similar “institutes” sprang up in many large cities. New Orleans at one time possessed three such establishments—on a small scale, of course. Only one of these, however, was the “authorized” or “official institute,” the others being without the fold, and therefore heretical; and it must be cheering to all lovers of orthodoxy to learn that these latter have vanished from the face of the earth, leaving only the true, genuine and authorized establishment to spread the fame and glory of the Keeley system.

When Keeley first brought out his system, he said that his remedy was bichloride of gold. Unfortunately, no such chemical substance exists on the earth, in the heavens above the earth or in the waters under the earth. It was surmised, though, that he meant the double chloride of gold and sodium. A few months after his system had become known he said that his “cure” did not contain any gold at all; then the wise ones surmised that he did not know what he was talking about, or else that he was telling what is euphemiously called an untruth.

Dr. Keeley went to England, and tried to introduce his system there; but that country had enough humbugs of its own to endure, and Keeley reaped a scanty harvest of shekels and an abundant harvest of abuse. One of the incidents of his

visit to that land of fogs was a large libel suit against the London *Lancet*, which journal had commented with unmeasured severity on Keeley and his methods.

The Keeley cure has received a mountain of abuse from the medical press, and still it lives. If we ask why, we may probably find the reason in an article by Dr. J. J. Brownson, of Dubuque, Iowa, who writes as follows in the *Medical News*:

As we are located near Dwight, many patients from this city have been there, and from various conversations with them, and after hearing a description of their symptoms while taking the treatment, I have come to the conclusion that the following, obtained from one of the graduates, who had the medicine analyzed, is the secret of the Keeley cure.

Patients on entering the institute are given a mixture containing

℞ Auri et sodii chloridi, ʒ ss.
 Strychninæ nitrat., gr. iv.
 Atropiæ sulph., gr. j.
 Glycerini, ʒ ij.
 Ex. fl. cinchonæ, q. s. ʒ xvj.

M. Sig. One teaspoonful in water three times a day.

The members report four times a day and receive a hypodermic injection of strychnine nitrate, gr. $\frac{1}{60}$. They are told they can have all the liquor they want. "If you feel like taking a drink," says the doctor, "just ask for it." Mark you now, here is the secret. If the patient asks for a drink of whiskey he gets it; but instead of the injection of strychnine nitrate, he receives one of apomorphine, gr. $\frac{1}{10}$. Of course, the whiskey makes him sick; he is unable to retain his once favorite beverage, and he promptly informs his fellow undergraduates, and writes his friends glowing accounts of the great change and new life that have come over him since taking this wonderful cure, which he feels sure could only have been brought about, as Mr. Keeley himself said in a lecture here recently, by divine appointment.

The reason why Mr. Keeley does not give his secret to the profession is obvious.

From the above it would seem that apomorphia is a potent enemy of whiskey. Suggestion may take part in the treatment, as we may infer from the following extract from the Chicago *Medical Standard*:

The Keeley institute in Chicago has been closed by the sheriff. The director charges the failure to the inability of

the institute to exert the same control over the Chicago saloons that Keeley does over those of Dwight. This is one probable cause, but there are other factors. The peculiarly "suggestive" mental atmosphere of Dwight could not be created other than in a small town. There are too many contending influences in a large city. The "dipsocura" home has not as yet been sold, but it depends on contributions of the persons who praised the sherry wine cocaine decoction, yclept, "vita nuova," as a non-alcoholic remedy. Did it depend on its patients, failure were certain."

Abstracts, Extracts and Annotations.

MEDICINE

THE RELATIONS OF ALBUMINURIA TO EXCESSIVE URIC-ACID SECRETION AND OXALURIA.

By PROF. J. M. DACOSTA, M. D., LL.D.

There is a distinct group of cases suffering with albuminuria and Bright's disease, the pathology of which is not yet clearly understood, but which have well-marked and easily recognized characters, separating them from the classical forms of renal disorder. If they are studied from a clinical, and especially from a pathological, standpoint, it will be found that they are different in origin, course and termination. Their study is therefore of interest both to pathologists and therapeutists. The lecturer communicated the clinical histories of a number of cases, which well illustrated these peculiar forms of albuminuria and Bright's disease, accompanying increased uric-acid formation and oxaluria.

The first case was a man, of middle age, who presented himself with albuminuria, and hyaline and epithelial casts also were discovered in his urine. He presented marked evidence of digestive disorder; flatulence, constipation, depression of spirits, etc. He also had much nervousness, and the group of symptoms commonly found in the condition known as lithæmia. In the morning, the urine in the vessel frequently exhibited colored deposits of uric-acid. The specific gravity of the urine was from 1,025 to 1,032, in other words it was

constantly above normal. There was a small proportion of albumen, in addition to excess of uric acid and urates, constantly present. In the treatment, special attention was directed to the digestive organs by the use of a selected diet; but very little regard was paid directly to the kidney disorder. The patient took a trip to Europe and spent some time at several celebrated baths on the Continent, and when he returned to this city he was in good health. This was four years ago, and he had had no return of his albuminuria during that time. He still is subject to nervous symptoms, and, at times, he has a return of his lithæmia. Professor DaCosta had occasion to examine his urine frequently during this period and had fully established the fact of the entire disappearance of the albumen and other apparent evidences of renal disease.

The second case was one presenting a group of symptoms remarkably like Bright's disease. There was more albumen than in the first patient and tube-casts were not only more frequent, but were also more commonly epithelial in character. The dyspesia was also more marked. The nervous symptoms of lithæmia were equally prominent. Neither this case, nor the preceding had dropsy. The pulse was not rigid; the action of the heart was decidedly increased. Although at first inclined to form a diagnosis of parenchymatous nephritis, the lecturer finally abandoned this view and classed it with the preceding as a case of lithæmia. The patient was sent to Capon Springs, and reported while there that he passed large quantities of water, and that, in the urine, he observed a considerable quantity of what he called sand, which was probably uric acid and urates. Since that time, he has remained perfectly well, and has had no symptoms whatever of kidney disease.

In another group of cases, the uric acid is not in excess. In place of the urates, however, we find the oxalates. These patients have the same symptoms of dyspepsia; but with more nervous depression and the usual symptoms of oxaluria. The urine has a high specific gravity, and deposits crystals of oxalates, occasionally intermixed with urates. Albumen, in small quantities, may appear. The results of treatment of these patients were the same as those in the preceding group, although the progress was more slow than in the others.

An illustrative case was that of a Harvard man, the records of which are of especial interest because of the complete analyses of urine which were made in the Harvard College laboratories. The analyses were made very often, and were remarkable for their fulness and completeness, the propor-

tions of all the constituents being carefully determined by expert chemists. This patient was much interested in his own symptoms and was very gloomy. He might be described as "the essence of gloom and misery." Oxalates at every examination were found in his urine. The specific gravity was always high, small quantities of albumen and casts were also present; and the thought that he had Bright's disease made him very despondent. He was put upon a vegetable diet and proper treatment, which will be discussed later. He has now been free from albuminuria for about fourteen months, and his general health is good.

To sum up what has been said and review the symptoms in order to see in which direction they point: In the first place, in not a single case did the speaker find dropsy. All of these cases have a varying amount of albumen, the proportion is rarely very large, sometimes it may be considerable, but it does not stay so. Many of them have tube-casts, some being epithelial. In one case, which he had kept under observation for a long time, the epithelial casts persisted for a number of years, but finally disappeared. The gentleman lived after this for many years and finally died with an entirely different affection. There is a tendency toward an afternoon rise in temperature in these cases. The entire absence of the cardiac complication of Bright's disease is to be noted. He had rarely found even rigid arteries; but a considerable number do have an intermittent pulse. All of them have dyspepsia with well-marked nervous symptoms which are usually recognized as lithæmic.

As to the important question of diagnosis, if we take into consideration the fact that these cases exist, with high specific gravity: with varying amounts of albumen and tube-casts; with dropsy; with digestive symptoms; absence of heart and artery disorder and absence of eye symptoms; and with the very marked character of the nervous phenomena, there should be no difficulty in the diagnosis. The chief difficulty would occur in certain cases of contracted kidney; those whose beginnings are extremely insidious, where albumen is small in quantity, or absent for comparatively long intervals, and the casts are few. It is possibly that, in such cases, difficulties of diagnosis might arise, but these would soon disappear as we study the case. Here we find no eye disorders; nor heart symptoms; neither has such a case low specific gravity of the urine nor dropsy. The male sex is more subject to this form of albuminuria than the female. It is true that men are also more liable to Bright's disease than women are; but the difference is still more marked here. The distinguished reporter stated that he had,

in all his experience, only met with one case in a woman. This was that of a young girl of eighteen years of age. It was stated that she had had a preceding attack of scarlet fever some years before; but she evidently had suffered no serious lesion of the kidneys, for she took a course at Carlsbad and was cured and has remained free from symptoms since. This would hardly have been the case if she had had organic kidney lesion, because Carlsbad is one of the worst places she could have gone if she really had the lesions of Bright's disease.

What relation does this bear to albuminuria of adolescents, or cyclical albuminuria, and other intermittent forms of albuminuria? These terms may be interpreted as meaning very much or very little. In the first place, take the albuminuria of adolescents; this generally is met with in boys, at the period of adolescence. The proportion of albumen is small, and, as a rule, it is found only in the morning urine. Upon going over the literature of the subject, the coincidence was noted that in these cases also was there a marked acid reaction. There was also the same high specific gravity; and in the sediment the microscope revealed the same excessive amount of uric acid and large proportion of urates; the same depressed nervous system with general prostration of strength. An interesting observation was made by Grainger Stewart, who found that a large proportion of the men in a company of soldiers, after marching, had albumen in their urine; the albuminuria being attributed to muscular exercise. This was accepted by Senator and others. The speaker, however, was not satisfied that it was due directly to exercise. Might it not be produced by increased tissue-waste, temporary lithæmia in fact, and by too rapid excretion? It is very likely that a great many cases of so-called cyclical albuminuria, and of intermittent or alternating albuminuria, are instances of lithæmic albuminuria. In all these cases as a rule, the albumen has been produced by increased excretion of the products of tissue-waste.

As to the prognosis, it is generally good—the patients get well. There had been only one case, in his experience, that did not get well. It was that of a very prominent manufacturer in this city who applied for life insurance and was rejected because albumen was found in his urine. This surprised the patient, who considered himself in good health. He could not account for it, except that he had been working very hard for some months previously; but he had not felt sick. His urine had a high specific gravity; it contained albumen and tube-casts. He took a trip to Europe and while there he was under the charge of an eminent physician in

London. He there got completely well, or thought that he did. During last year, however, albumen has reappeared, but this time with urine of low specific gravity, and with casts, which now have a more serious import than at first.

Therefore, it is possible that a certain proportion of cases of this kind may in the course of years, terminate in Bright's disease. It has been suggested, by Hayg and others, that gouty kidney has been caused by excessive excretion of uric acid. This, in fact, would be in the line of what has been brought up to-night—but that would be to take too narrow a view of it. There are the contracted kidney, the heart complication, the fibrosis of vessels, which must also be considered, and the relation of which to lithæmia, at present, must be left an open question.

The orator declared his opinion that the prognosis is favorable in the class of cases brought up for discussion. It is a great relief to the patient to be told that he has not Bright's disease, especially after his rejection on this account by some life insurance company.

In conclusion, a few points of treatment were touched upon. The dietetic treatment is of first importance. Milk was recommended, but not an exclusively milk diet. A moderate amount of meat is allowed as long as the patient is able to take daily exercise. Green vegetables, bread in moderation; but butter, sugar and carbo-hydrates are restricted or certain forms entirely omitted. The great value of laxatives is to be acknowledged. Some of the older physicians, without knowing exactly why they did so, at least learned from experience to give these patients blue pill, and good results usually followed. A mercurial, followed by a saline the next morning, is often of great service. The action of the kidneys should be kept up by citrate or acetate of potash, and the tubules flushed out by the use of mineral waters. The patient must be systematically exercised; this is of importance especially in boys. He cited a final case, in illustration, of a boy with this form of albuminuria in whom after a horseback-ride the albumen always disappeared from his urine. The inhalation of oxygen might be resorted to temporarily, but he had not used it sufficiently often in this disorder to determine that it had any special value—in fact, he had only used it in conjunction with other remedies.

In the discussion following the reading of the paper, Professor DaCosta, in reply to a question, stated that he ascribed the albuminuria to irritation of the kidneys, with some congestion resulting from this irritation. Recurrence of attacks had been observed, and in one patient the entire train

of symptoms reappeared after partaking of ordinary rhubarb-plant, which produced a return of oxalates in the urine.—*Boston Medical and Surgical Journal*.

THE DISCUSSION ON THE TREATMENT OF CHRONIC BRIGHT'S DISEASE AT THE FRENCH ACADEMY OF MEDICINE.

At the Académie de Médecine in Paris, sessions of August 30 and September 6, the subject of the dietetic and other treatment of Bright's disease was the topic of discussion.

There was substantial agreement as to the necessity of a general restriction of albuminoids for fear of augmenting the albuminuria; but Germain Sée was of opinion that eggs might be permitted, provided they were well cooked. He was also in the habit of allowing white meats and fish, provided patients have a good digestion. The dark meats augment the production of albumen in these renal diseases and promote the morbid alterations, although it is difficult to give a satisfactory reason for this, seeing that in well persons a meat diet does not give rise to albuminuria. Broths must also be prohibited by reason of the potash and the ptomaines and extractives which they contain. It is true that in healthy individuals one has never remarked harm from this source, and the toxicity of broths in renal diseases is yet to be accounted for.

Dujardin-Beaumetz thought that in Bright's disease the element of permeability of the kidneys should have principal emphasis; the amount of albumen in the urine plays but a secondary role from the point of view of prognosis and treatment. It is entirely on considerations connected with the permeability of the kidneys and the danger of retention in the economy of toxines that the treatment, and especially the dietetic treatment of Bright's disease should be founded. The indications are to facilitate by the supplementary emunctories the elimination of toxines, and to limit as much as possible their production. To promote elimination, purgatives should be the first resort, then diaphoretic agencies and diuretics may be employed. The second indication is met by intestinal antiseptics and a proper dietary regimen. Intestinal antiseptics may be obtained by the internal administration of benzonaphthol, three to five gram a day; in order to reduce to a minimum the formation of toxines, the vegetarian regimen in all its rigorousness should be prescribed, all meats being prohibited. The same prohibition applies to alcohol. Eggs are permitted, "as it has never yet been proved that eggs, even when raw, have increased the quantity of albumen in the urine." Fruits and

green vegetables generally may be allowed, but cabbage is to be interdicted. Cereals generally, especially rice, and potatoes "which are three times and a half less nutritious than rice," are unobjectionable. When the patient is menaced with uræmia, the exclusive milk diet is to be advised.

With regard to this question of the prescribing or withholding of animal food and eggs in nephritic complaints, it is noteworthy that Schreiber takes the view that the leading authorities, especially Senator, have acted too much from theoretical considerations. He experimented upon eight persons with renal disease, giving them, along with their ordinary diet, six to ten eggs daily. Before the experiment, they were observed until the daily amount of albumen had been determined and its fluctuation noted. The same observations were made after discontinuing the eggs. In fever cases the eggs were boiled; in the others they were eaten raw. Of the former, the patients ate six eggs daily, and in not one case could any increase of albumen be noted. In the second group, six to ten raw eggs were daily administered to each patient, and not only did not increase the amount of albumen in the urine, but led to its diminution. Similar results are reported from Leyden's clinic, and these observations agree with those of Oertl, who states that considerable albuminous food may affect albuminuria favorably,* and opposes the idea of a special dietary.

While there are, however, doubtless many in the profession who agree with these German authorities, and permit a mixed diet in chronic, not too advanced cases, there is a predominant tendency everywhere to regard the loss of albumen as an important symptomatic indication for treatment; and if there are yet insufficient data to prove the noxiousness of eggs as an article of diet, the recent investigations of Stewart go to show that the prolonged use of meat and meat extracts, especially if taken in large amounts, is apt to aggravate any inflammatory disturbances in the kidneys.†

There is no contention as to the utility of milk diet in Bright's disease; this should sometimes be absolute in the acute forms, and even in the chronic forms; at all times and in all stages milk when well boiled may be taken to advantage as a part of the daily dietary. In interstitial nephritis, the utility of milk as an exclusive aliment is not, in the opinion of Germain Sée as expressed at the recent meeting (*vide supra*) so clearly indicated: at the best it is only an adjuvant aliment. He would, however, regard milk as unequaled in the parenchymatous (dropsical) forms, both as a food and as a diuretic.

* Berlin klin. Woch., June 10, 1889. Sajous' Annual, 1890, Vol i, p. 17, G.

† Oesterr. Ungar. Centralblatt für die Medicinischen Wissenschaften, Vienna, March 21, 1891; Weekly Medical Review, St. Louis, May 30, 1891.

Where milk is not tolerated, Sée often gives to advantage *lactose*, which as a diuretic "is the least irritant of all, and does not interfere with the ordinary dietary of the patient."

In interstitial nephritis (from whatever cause) there is, according to Sée, one vital indication to meet; to sustain the forces of the patient. To this end, he does not hesitate to prescribe a fortifying regimen, "as albuminous as in a state of health," and composed of a due admixture of albuminoids and carbo-hydrates. He would allow both white and dark meats, the nitrogenous legumes, milk, eggs, butter, and a little Bordeaux wine.

As for the pharmaceutical treatment, Sée repudiates the greater parts of the medicines which have been in use; he opposes vesicatories, local blood-letting, and sudorifics under every form. He rejects diuretics, with the exception of lactose, and questions the utility of the cardio-vascular medicaments (*digitalis*, *strophanthus*, etc.), and all ferruginous preparations. The only medicaments in which he has any faith are the iodides, which are especially applicable to the specific affections of the kidney, and the salts of strontium and of calcium under the form of bromides, lactates or chlorides, which have given him gratifying results.

At the same meeting, Dr. H. B. Millard, of New York, remarked that in Bright's disease there is nothing to hope when the epithelium is destroyed; nevertheless, if the disease is not curable of itself, the physician is not powerless against the acute accidents of the disease.

The cases susceptible of practical cure are those in which the renal cirrhosis is much circumscribed, and where a great extent of the kidneys is still functionally sound. It is the same when only one of the kidneys is affected.

From the point of view of prognosis, he thinks that ordinary chronic albuminuria, due to glomerular lesions without lesions of the tubes, is never cured, whether there be albumen in the urine or not. In the large white kidney, amelioration is even more rarely observed than in renal cirrhosis; he has, however, seen a few cases with abundant albuminuria get well, but these certainly could not have been instances of the large white kidney or the fatty kidney; probably he had to do here with simple tubular nephritis.

As for acute Bright's disease, malarial and syphilitic nephritis, their curability has been sometimes observed.

As for the treatment, he keeps his patients in bed in the grave forms and prescribes the milk diet and a light azotized regimen.

As for medicaments in Bright's disease, he has often obtained benefit from the employment of ergotin, caffeine, digi-

talis, arsenic, as well as from the albuminates and chlorides of iron. The treatment by the sodic-bicarbonated waters has also given him good results in certain forms of Bright's disease when the liver was also implicated.—*Boston Medical and Surgical Journal*.

A TOPICAL TREATMENT OF BRONCHITIS.

By EDWIN J. KUH, M. D., of Chicago.

During the last two years I have employed a method in the treatment of acute and chronic bronchitis which, in point of both rationality and success, seems superior to all other methods known to me.

The first suggestion was received through an article by William Murrell.* As early as 1874 Murrell wrote an article in the *Lancet* on "Ipecacuanha Spray in Winter Cough and Bronchitic Asthma." This paper was followed by various others describing the successful use of this treatment both in England and America. Intermediate to these articles Murrell published similar ones in the same line of observation. His method can briefly be described as follows: Ipecacuanha wine was diluted with twice its bulk of water; inhalations were practised by means of either a steam spray or a double bulb atomizer; the latter was principally used. Patients were made to inhale for about one-half hour, and as much as four drachms were used. As a rule from 100 to 260 compressions of the hand-bulb were required, 100 squeezes being equivalent to about one drachm of the fluid. It immediately becomes apparent that this method is too awkward for extended use, although Dr. Murrell publishes very successful experiences with over 200 patients. The ipecacuanha spray, as he himself states, occasionally nauseates and augments the dyspnoea in bronchitic asthma.

After prolonged trial I abandoned both the alcoholic and watery sprays and used only oily menstrua. Alcohol and water choke off the breath in the method which I am about to describe.

I apply direct inhalation from what is known as Davidson's atomizer, No. 65, which is connected with an air-tank of about thirty pounds pressure. This atomizer emits a very fine and copious spray. The tip is introduced into the mouth in the same manner as in laryngeal and tracheal treatment. The patient is instructed to make as prolonged an expiration as possible, to pause for a moment, then to begin inhaling gently and

*Wood's Medical and Surgical Monographs, August, 1890.

slowly, and then more rapidly and deeply; during inspiration the spray is started slowly, and then with more or less force, the patient thereby drawing the vapor into his lungs. The successful result of this method depends upon the skill with which the patients inhale. Not all persons are able to inhale correctly without more or less practice. The spray must be forced from the atomizer and be actively drawn down into the chest; a mere patency of glottis is entirely insufficient; the method is a failure if this is not insisted upon. In correct inhalation you can see the spray drawn down into the chest, just as a strong draught will draw smoke into a chimney. If you see vapor suspended in the mouth and throat the inhalation is imperfect. The spray evidently forms a moist coating in the tubes, and but a very small quantity is again exhaled. Severe fits of coughing will expel small additional clouds of vapor, but almost all of it remains in the chest. This method of inhaling must be distinctly separated from the well-known ones from steam or vapor atomizers, of which latter most throat specialists are in possession in one form or another. The usual steam atomizer and vaporizers in use have a far more limited efficacy because they are milder applications.

The composition of the spray to be used can, of course, be varied according to the exigencies of the case or the preference of the physician. No spray, I believe, will be very effective without the presence of menthol. The formula which seems to have been most useful to me consists of: Menthol, from 1 to 2 per cent.; creosote, 1 per cent.; camphor, from $\frac{1}{2}$ to 1 per cent.; oil of eucalyptus, 2 per cent.; oil of pine needles, 2 per cent., in albolene or benzoinol. The average quantity to be inhaled is two drachms. Patients then begin to gag and the stomach revolts against more. These two drachms are, in well-trained patients, absorbed in about eight or twelve inspirations.

The sensation of the spray extends over almost the entire anterior portion of the chest. It is described as either cooling or warming. Many patients feel the sensation extend to the diaphragmatic line. It causes some hot smarting in and above the larynx. I have never seen it cause laryngeal spasm when deeply inhaled. It does not seem at all unreasonable to assume that so vigorous a treatment, extending probably into the finest ramifications of the air-tract, and in a mild sense flooding them, might possibly injure. But this has never yet, in my experience in hundreds of treatments, been the case. It is possible to train intelligent children in this treatment. My youngest patient was three and a half years old.

The results are most striking in the severest cases of

chronic bronchitis; the severer the case the more palpable the result. I refer principally to those cases with tenacious, thick, yellow, or greenish bronchial discharge, with or without dyspnœa. It is astonishing with what almost instantaneous success practically incurable patients with an old bronchitis complicated with emphysema, an anxious, sallow face, and wheezy respirations, will improve. The inhalation in these cases is generally (especially in the beginning of the treatment) followed by a succession of explosive coughs and a mouthful of heretofore unremovable phlegm; the spray seems actually to scoop out the secretion in these cases. These patients, who found it impossible to rest in bed, will, within a week, enjoy comparatively peaceful sleep. From week to week a greater permeability of the smaller tubes can be noted by auscultation. The phlegm gradually loses its purulent character and becomes mucoid; it also decreases so much in quantity that even during the inhalation very little, or none, can be raised.

In the few cases of bronchitis complicating chronic nephritis and diabetes under my observation, the results were equally gratifying. We must consider the circulatory and other changes in these diseases as predisposing to bronchitic affections. The maximum results in chronic bronchitis are generally obtained within the first two weeks of treatment; after that the amelioration progresses at a slower pace, and finally reaches its maximum.

The only flaw which I have found in the treatment is that it will not cure a large proportion of cases of chronic bronchitis *completely*; there frequently remains an occasional cough, with or without a slight *non*-purulent discharge from the tubes. I have not yet found a method of making the cure in all successful cases complete. I should be grateful for any suggestion in this direction. The explanation why a perfect, ideal cure is exceptional is, from a pathologic standpoint, easy to explain. The hypertrophied bronchial mucous membrane will naturally remain hypertrophied, and manifest its condition by some sensitiveness and hypersecretion. My most unsuccessful cases of chronic bronchitis are those which are classified as *catarrhe sec*: on auscultation one hears, or does not hear, an occasional piping râle and harsh breathing, and the patient states that he raises no phlegm. These cases of chronic, dry, hacking bronchial cough, especially in elderly people, I have frequently found disappointing.

If an asthmatic has sufficient control over his respiration during an attack to inhale the spray the paroxysm can be aborted.

During the last two hay-fever seasons patients have

regularly come for relief of their dyspnœa, after having once tested the method. It is an excellent palliative in these cases.

I believe that the inhalation should be used in pertussis. In the light of newer research concerning the probable localization of the pertussis-infection the spray must also in this disease be forced below the trachea to be of any benefit.

In those cases of nasal asthma, with persistent bronchitis after the nasal treatment has been exhausted, it is a very useful and frequently curative after-treatment.

To those who are not discouraged with all treatment in pulmonary tuberculosis I would suggest this method for the exhibition of creosote. In a 1 per cent. oily solution creosote is barely perceived; they could therefore use considerably stronger solutions.

In *acute* bronchitis, without fever, the effectiveness of the spray is so pronounced that those who have had experience with it resort to it at each onset of a bronchial disturbance. I am strongly tempted to the claim that it will abort acute bronchitis; but conscious of the liability to fallacious conclusions in a self-limited and naturally brief disease, I make it with all possible caution. If it does not abort every attack, it certainly alleviates all of them.

Do the chronic cases relapse? As I have been employing this treatment for only two years I can not give a final answer. Those relapses which have come under my notice were discharged after a few treatments.

In chronic cases it is best to begin with daily inhalations for a few days, then on alternate days, then at intermissions of three, four or more days; then once a week will suffice, until a maximum result has been reached. In this manner it is possible to extend a minimal number of treatments over several months, which amount of time is required in the severer cases. I do not, as a rule, exhibit medicines during this treatment, as they are usually superfluous. When there is dyspnœa associated with the trouble the potassium iodide should not be dispensed with. Codeine and the wine or syrup of tar seem to rank next in usefulness.

I can afford to prescribe these drugs now without jeopardizing the conclusions drawn from the effectiveness of the inhalation, because by former exclusively topical treatment I have learned how much to attribute to medicinal and how much to the topical treatment. I never use drugs in the beginning of the treatment, in order to get a clear result from the inhalations.

Murrell's publication of 1890 does not seem to have stimulated the profession, if I may judge by the lack of litera-

ture on the subject. I have seen no reference to anything like my modification of Murrell's treatment in the foreign and domestic journals at my command, nor do Schmidt's *Fahr-bücher*, or Sajou's *Annual* refer to any such treatment.

Beverley Johnson, in his monograph on "Inhalers, Inhalations and Inhalants," in the *Physicians' Leisure Library*, describes the deep sprays with alcoholic and watery menstrua. He has justly deserted these as insufficient, and advocates vapor inhalations with the globe inhaler. This method seems useful, but is far slower and weaker in its result than the method I have described.—*Medical News*.

THE UTILITY OF CUPPING IN AN OBSTINATE CASE OF PERSISTENT HICCOUGH.

By T. LOUIS FOGARTY, M.D.

G. Mc H., male, aged 21 years, native of Brooklyn, was taken suddenly ill in church, February 24 last; had a severe chill, which lasted about five minutes. This was repeated in about an hour. On going home he retired, after taking a hot mustard foot-bath and drinking a hot toddy. The chill lasted about an hour this time. A physician was summoned, pending whose arrival the hiccoughing began, and continued incessantly, in spite of the physician's exertions. On the evening of Wednesday, the 27th of February, I was called to attend the case. The hiccoughs (three days and nights in duration) had left the patient, naturally anæmic, very weak; temperature then 104 deg; pulse, 140 per minute; respiration, short and jerky; dullness on percussion over base of left lung. The patient was in a semi-conscious condition, delirious, picking at the bedclothes, and crouched low down in the bed. A rash, resembling that caused by antipyrine, all over the face and body; marked tympanitic distention of bowels, no passage therefrom in two days. I prescribed one-fifth grain doses of morphia in aqua menth. pip., and aromatic ammonia. After the first dose the distressing complaint stopped, but began again in thirty minutes. Another dose of morphia was given then, as before, stopping the hiccoughs only to have them come on again at intervals of thirty minutes throughout the night. He slept by snatches through the night, as I pushed the morphia. The following morning he was given 1-100 grain of nitro-glycerine tablets, one every six hours through the day. This seemed to check the hiccough somewhat, but to no satisfactory extent. I tried nitrite of amyl to relieve the spasm, also made strong pressure on the phrenic

nerve at the shoulder-blade—both much vaunted remedies for hiccough—but with no result. On the evening of the 28th of February I suggested the advisability of a consultation with Prof. Frank E. West, M.D., who met me at the case at 8:30 P.M. He confirmed my diagnosis and sustained my treatment. I resorted to cupping over the region of the diaphragm, which I continued to apply at intervals of two hours at first, subsequently at intervals of three hours, with wonderful effect. They stopped the hiccoughs. I had to put on about sixty cups. The patient's strength was kept up by small and frequently repeated doses of bovine and milk, and milk and brandy. He rapidly convalesced. After all antispasmodics failed cupping proved successful.—*Brooklyn Medical Journal*.

SURGERY.

THE TREATMENT OF COMPOUND FRACTURES BY MODERN METHODS.

BY HERBERT L. BURRELL, M. D., AND EDWIN W. DWIGHT, M. D., OF BOSTON.

During the past few years the treatment of compound fractures has undergone radical changes and marked improvement. In this paper we shall confine ourselves to a consideration of the treatment of fractures of the thigh, leg, arm and forearm. The improvement in the results has been brought about by two causes.

(1) Thorough exploration and cleansing of the wound, and antiseptis.

(2) By the recognition of the importance of the physiological principle of complete rest for a fractured bone.

It is of passing interest to consider what results were obtained in the treatment of compound fractures by the older methods. In Guy's Hospital from 1841 to 1861, twenty years, there was a mortality of about 28 per cent.; in the Pennsylvania Hospital from 1839 to 1851, twelve years, there was a mortality of 44 per cent.; in the New York Hospital during a similar period there was a mortality of 48 per cent.; in the Obuchow Hospital Report of St. Petersburg there was a mortality of 68 per cent.

Under modern methods Dennis reports one thousand cases of compound fractures, and after removing from consideration such cases as he feels justified in eliminating, has remaining six hundred and eighty-one cases of compound fractures, with

one death from sepsis, giving a death rate of one-seventh of one per cent.

In the mortality there has been such a noticeable decrease that it demands careful attention. It will be of interest to consider the subject of compound fractures from the following standpoints:

(1) The class of case that can be saved with a useful leg, and the class of case that requires amputation.

(2) The detail of "putting up" a compound fracture.

(3) The management of a compound fracture.

(4) The prognosis.

(1) *The class of cases that can be saved with a useful leg, and the class of cases that require amputation.*

A primary amputation for a compound fracture at the Boston City Hospital is extremely rare; a few years ago it was common. Limbs which would formerly have been unhesitatingly removed are now saved. To define precisely what should govern one in the amputation of a leg is extremely difficult; but we take into consideration the following factors:

a. The age of the patient. Old age by no means indicates amputation.

b. The physical condition of the patient in regard to alcoholism, renal trouble, etc.

c. The patient's environment.

d. The attention that he will receive in the after-treatment of his case.

e. The facilities for "putting up" his leg antiseptically and in plaster.

f. The condition of the soft parts, bones, arteries, veins and nerves.

Extremely extensive crushing of the soft parts in a young person does not mean that amputation is necessary; obliteration of the main vessel or vessels in a limb demands amputation. It must be remembered that frequently swelling prevents the surgeon from feeling the pulsation of the anterior and posterior tibial arteries, and it is only when they are known to be obliterated that amputation is resorted to. In short, we try to save everything, and resort to a secondary amputation if necessary. One's personal judgment must be applied in each case in deciding what to do. Given an old man in very feeble health, with extensive crushing of the soft parts and great destruction of the bone, even if the vessels pulsate, it might be more judicious to amputate than to attempt to save the limb. Yet a man aged seventy-five, with a compound comminuted fracture, without extensive crushing of his limb, had both life and limb saved.

(2) *Details of "putting up" a compound fracture:*

In the first place, let us say that as much care is taken in the treatment of compound fractures with small openings as in cases where there is extensive crushing of the soft parts; and in several instances where this principle has been disregarded, and the small opening sealed up without properly exploring and cleansing the wound, unsatisfactory results have occurred.

We can divide compound fractures into three classes so far as the detail of "putting up" is concerned.

(1) Where there has been simply a puncture of the skin by a protruding fragment of bone, or a clean incised wound down to the bone.

(2) Where there is associated with a compound fracture a protrusion of the fragments; considerable destruction of the soft parts; and contamination by dirt.

(3) Where the injury is so severe that it is a question whether to amputate or not.

In all these cases the following preparations should be made: A large bucket of hot corrosive sublimate, 1-2000, is made up; a fountain syringe is filled and hung up; beneath the limb is placed a folded rubber sheet which leads into a bucket beneath the table or bed; and the following clean instruments are sterilized: a knife, a pair of scissors, a few artery pressure forceps, a curette, a probe, a pair of anatomical forceps, a small pair of bone forceps, and a strong pair of forceps to detach any loose fragments of bone. Sterilized silk, catgut, and needles should be at hand. In all compound fractures we prefer to anæsthetize the patient, that the cleansing may be complete.

Where there has been simply a puncture of the skin by a protruding fragment, or a clean incised wound down to the bone, the limb should be cleansed with soap and water and shaved, and after washing with ether to remove any fatty substances, surrounded with sterilized towels saturated with a 1-2000 solution of corrosive sublimate to prevent contamination from surrounding objects. The wound should then be douched with corrosive sublimate solution, and the fracture reduced. If there is any dirt on the edges of the wound, or they are crushed, the dirt or the skin about the opening should be removed. The wound may then be sutured and dressed, and the fracture is practically a simple one.

When however, there is a protrusion of the bones or contamination of the wound by dirt, the patient should always be etherized, and the wound washed, shaved, and cleansed vigorously. We lay open all cavities and freely expose any pockets that may exist; remove all completely detached fragments of

bone, unless they are very large and adherent to the periosteum, when we allow them to stay in position; snip off any devitalized tissue; replace the bones in position; and suture the overlying soft parts without drainage. It is very exceptional at the present time to use drainage tubes. Our statistics of cases treated with tubes show that both the immediate and ultimate results are not as good as when the cases are treated antiseptically with plaster. This statistical difference is not due to the severity of cases treated with tubes, for many of them were not severe cases. It has seemed that the difference was due to the necessity of removing the tubes early, and the consequent disturbances of the fracture.

The dressing in all these fractures is baked gauze, the inner layers of which are saturated with a 1-2000 solution of corrosive sublimate; then a light, circular, plaster-of-Paris bandage is applied in a manner which will be described later.

Where there is difficulty in maintaining the position of the fragments of bone, in a number of instances we have divided the tendo Achillis with great benefit. This simple procedure allows a backward or a lateral displacement to be easily overcome.

Where the fracture is so severe that amputation may be necessary, the same care is taken in "putting up" the fracture, but a fixed dressing of plaster-of-Paris is not always used. Dr. W. P. Bolles' fracture-box, Smith's anterior splint, or a pillow adjusted to the limb with side-splints, may be used until the fate of the limb is determined.

Compound fractures, after the application of the antiseptic dressing, have been put in plaster-of-Paris or immobilized by some other means. At present the drift of work is toward the almost exclusive use of plaster-of-Paris as a fixation dressing.

Within the past few years the application of plaster-of-Paris bandages has greatly improved. The objections to the use of plaster-of-Paris formerly were, its thickness and weight, the slowness of its "setting," and the difficulty of its removal. All these difficulties have been largely overcome. We now use bandages of washed crinoline. Washing removes the sizing from the crinoline, which would hinder the "setting" of the plaster-of-Paris. They are five yards in length and four or five inches in width, and are rolled evenly and should be made up with fresh plaster.

Plaster-of-Paris bandages, unless they are freshly rolled, rapidly deteriorate by the absorption of moisture. To overcome this difficulty, and to render its use more feasible for the general practitioner, we have taken long circular tin cans of the

following dimensions: three and a quarter inches in diameter, and nine and a half inches in length. Into one of these tin cans can be packed a sufficient amount of plaster-of-Paris bandages for the "putting-up" of a compound fracture of the leg. In the can, besides the plaster-of-Paris bandages, should be placed a quantity of loose plaster-of-Paris, and three strips of tin nine inches long and a half inch wide, which can be used for re-enforcing the plaster if necessary. A quantity of these cans may be prepared at one time by the practitioner, the covers sealed on by paraffine, which renders them impervious to moisture, and the cans may be wound with sheet wadding, which will serve to act as a protectant to the limb. The whole may then be enclosed in paper and tied up, and can be put on the practitioner's shelves in his office, and will always be ready for emergency use. One of these cans can be unsealed, and the plaster-of-Paris bandage immersed in warm water without salt. We have found that salt renders the plaster brittle, and does not materially hasten its "setting."

If we use washed crinoline bandages, the bandage is then applied over the sheet wadding which has been wrapped about the leg. In case it is difficult to hold the upper fragment in its proper position, the plaster bandage is put on below and above the fracture, and then the two are joined, while the surgeon's thumb holds the fragment in position until the plaster sets. In all cases where the fracture of the leg is above the junction of the lower and middle third of the limb, the plaster should be extended to and above the knee, in order to immobilize the gastrocnemius. Usually after "putting up" a compound fracture in the foregoing manner, if there is any pain within the first twenty-four hours, we swing the leg by means of a Smith's anterior splint, or some similar device. Swinging fractures, after "putting them up" in plaster-of-Paris, relieves the pain, and saves the administration of morphia.

(3) *The management of a compound fracture:* In applying the primary dressing the practitioner should exercise as great care as if the ultimate fate of the limb depended solely on the dressing, and this was the case in many instances three years ago. At that time fractures were put in plaster-of-Paris, and at the end of a month or six weeks the plaster was removed, and union by first intention, without a drop of pus and perfect results in the union of bone, was the rule. But exceptionally, on removing the plaster-of-Paris bandage, a limb bathed in pus, or an extensive slough, or a crooked limb, was discovered. This has led us personally to be more cautious, and the rule which we have adopted in reference to changing the plaster-of-Paris bandage is somewhat as follows: That unless the sur-

geon is absolutely sure that the fragments are in perfect position, not over two weeks should elapse without changing the plaster-of-Paris dressing; and that even if he is perfectly sure, it is best at the end of a fortnight to change the plaster and renew the dressing; for very exceptionally he will find a collection of pus without there having been a rise in temperature, a slough (aseptic) without external evidence, and worst of all, a bowing backward of the tibia and fibula, which, when united, is with great difficulty overcome.

The rule which we have pursued is to change the plaster on the seventh day; and to change the plaster again at the end of the fifteenth or seventeenth day when union in the bone is beginning; and at this time we put on a plaster-of-Paris bandage which will remain until the bone is completely united. This may seem laborious. It would have been so with a plaster-of-Paris bandage as they were formerly applied; but it is not so with light circular plasters which can be divided easily and quickly in the median line in front by the method proposed by Dr. Goldthwaite, which is as follows:

A sharp-pointed knife scores the bandage from top to bottom. A little water from a medicine dropper is allowed to run in this groove. This softens the plaster, and by means of the knife and the medicine dropper filled with water, an ordinary plaster-of-Paris bandage can be removed in from two to three minutes, and in five minutes more a fresh plaster-of-Paris bandage, consisting of two bandages for the leg, and three, or, at the most, four, when the plaster extends to the middle of the thigh, can be re-applied. This is quite different from the method of sawing the plaster-of-Paris bandages, which frequently occupied twenty minutes to half an hour. This application of light plaster-of-Paris bandages, and their easy removal, is, to our minds, a very important point in the management of compound fractures, as it enables the surgeon at any time to see what is going on inside the dressing.

We rarely, if ever, re-apply a cut-up plaster after it is entirely removed from the limb. Greater security is afforded the limb by the application of a new and complete circular plaster-of-Paris bandage. A rise in temperature and pain in the limb still remain the cardinal reasons for the removal of a plaster-of-Paris bandage. We disregard a rise in temperature to 100 or 101 deg. for the first three or four days; but after the first forty-eight hours, severe or constant pain in a fracture, whether it be simple or compound, is a symptom that we never disregard, and requires a careful investigation as to its cause. Frequently the simple division of the plaster in front is a relief to the pain. The plaster can be held together by straps and buckles.

Formerly if a plaster-of-Paris bandage leaked through, we changed the dressing. Now, however, we reinforce the plaster-of-Paris bandage at the point at which the leak first occurs, by applying an antiseptic dressing outside of this. In case we find marked bowing or lateral displacement in a compound fracture at the end of a fortnight or three weeks, it is corrected by suitably applied pads, and if necessary tenotomy of the tendo Achillis under an anæsthetic. Occasionally we resort to the use of Smith's anterior splint, or a fracture box, and the best of these is Dr. Bolles'.

In managing a compound fracture in an alcoholic there is nothing more satisfactory than to place it in a plaster-of-Paris bandage for protection. He can then thrash about without destroying his limb. Even in the most hopeless cases, where delirium tremens, pneumonia, or uræmia complicate a compound fracture, the practitioner should never forget that the plaster-of-Paris bandage requires changing at appropriate intervals of time. Unless this precaution is taken, a limb with backward or lateral displacement of the fragments may come out of the plaster-of-Paris bandage at the end of six weeks.

(4) *Prognosis*: The restoration of the limb to usefulness is a matter of great interest. Although pus, sloughing and necrosis all hinder the rapid recovery of the patient, the patients almost always have useful limbs. So far as investigation has led us, we have found only two cases with useless limbs. One is possibly due to acquired flat-foot from the injury; the second is a forearm, where after a compound fracture of both bones, without extensive destruction of the soft parts, non-union and a "dangle" limb is reported. Primary amputation was advised in this case. In a number of cases amputation of the limb was advised, and yet the patients recovered with useful limbs. This has led us to be extremely careful about advising a primary amputation.

Lateral displacement and backward bowing of the leg are the common deformities in adults, but not in children. The danger from sepsis is very slight; although there has been pus in a small number of our one hundred and sixty cases, yet there has been no death from sepsis. There have been two cases of death from tetanus, and one from fat embolism.

The prognosis of a compound fracture of the limb depends upon the same considerations that determine whether the limb shall be amputated or not. Extensive crushing of the soft parts hinders the restoration of the limb to usefulness fully as much as necrosis of the bone. If at the end of six months a sinus remains, and loose fragments can be detected, an operation for their removal is indicated.

In short, we have come to regard the prognosis of compound fractures as very favorable. As an example of the confidence which is felt by one surgeon in the treatment of compound fractures, we may say that he has told us that if he had a "simple complicated" fracture, which was attended by much pain, he should not hesitate to have it converted into a compound fracture, that the cause of the pain might be determined, and, if possible, remedied. This is, perhaps, too confident a view to take of a compound fracture; but it illustrates the marked change in results which has occurred.

Conclusions—(1) That every compound fracture of the thigh, leg, arm and forearm should be rendered scrupulously, surgically clean, and should be absolutely immobilized.

(2) That this immobilization is conveniently attained by the light, circular, plaster-of-Paris washed bandage.

(3) That a plaster-of-Paris bandage should not be allowed to remain on a limb over a fortnight in the first month of treatment of a compound fracture, as backward bowing and lateral displacement can be avoided by this precaution.

(4) That while pus, slough, necrosis or deformity may exceptionally occur, yet the rule is, union by first intention, and the early restoration of limbs to usefulness.—*Boston Medical and Surgical Journal*.

TUBERCULAR GLANDS OF THE NECK.

Enlarged glands of the neck in children may be grouped in two classes: (1) the tubercular; (2) the simply hypertrophied gland. The vast majority, in my experience, belong to the first class, while those belonging to the second have been but occasionally met with. They are due to some irritation about the head; they never suppurate, and subside as soon as their exciting cause has been removed. They are most frequently secondary to pediculi or eczema capitis.

On the other hand, a tubercular gland or glands have been found whose origin seemed to be due to the same cause, so that the existence of disease of the scalp in connection with enlarged glands can not be considered as a proof that the disease of the gland is not of a tubercular nature.

The tendency of a tubercular gland is toward caseation, calcareous degeneration, or abscess; they seldom undergo resolution. The deposit, if small, may become encapsulated, and, in rare cases, give no further trouble, but, as a rule, an abscess slowly forms, opens, and continues to discharge until all diseased tissue has been eliminated, leaving unsightly scars and blemishes, so often seen.

From the experience derived from these cases, the inference has been drawn that one or many tubercular glands of the neck are not a symptom of general tuberculosis, except in rare instances; thus, in sixty-one cases, in only three children have these glands been known to be accompanied by tubercle in other parts of the body, and in these the enlargement of the glands of the neck followed, not preceded, tubercular deposits elsewhere. Most of the cases operated upon have been seen or heard from at various times since the patients left the hospitals, and, with but two exceptions, not a single one is known to have died from tuberculosis. From the above it would seem that tubercular adenitis is a local, not a general, affection, and that the danger from general infection is not great. This deduction, it must be understood, is personal from a hospital experience.

Clinically, tubercular glands of the neck have been met with under two conditions: (1) The large, isolated gland or glands; and (2) a number of small or moderately enlarged glands blended together by inflammatory products.

Of the first class, the number of glands involved has varied; in some cases only one, in others two or more glands have been diseased—if there has been more than one on a side. They are separated by more or less normal tissue, unless there has been a periglandular abscess with its secondary inflammatory changes; but they have never been found matted together, as in the second class. The contents of these glands have always been of a tubercular nature, the amount found depending upon the size the gland has attained. The larger the tumor, the more has the glandular been replaced by tubercular tissue, so that in many examples the contents of the capsule were formed entirely of caseous and semi-liquid material. These glands vary much in size; some are but little enlarged, while others attain considerable size. The largest removed measured three inches in their largest diameter. In older glands the more fluid portions of these contents may be absorbed and calcareous material found.

The course pursued by these glands varies. In a few cases, after attaining a large size, there has been no further increase, but a gradual diminution in size, their more liquid contents being absorbed and replaced by calcareous matter, the capsule shriveling up, and no further trouble is ever experienced. This course is not always followed, however, even in glands whose contents have undergone absorption. Often, in opening an abscess of the neck, nothing is found to account for its presence but calcareous material which has escaped from an old atrophied gland and has set up a tubercular abscess.

In those glands whose contents do not follow the course mentioned above, after a time the capsule gives way at some point and allows the escape of infected material into the surrounding tissue and a tubercular abscess is slowly formed, which often attains considerable size, perforating the skin; finally a sinus remains with undermined and unhealthy skin; this sinus may discharge for years, leaving behind it deformities and unsightly cicatrices.

The second class consists of small or moderately enlarged glands, often consisting of a chain of glands blended together in a mass by inflammatory products. These masses form large swellings in the neck. On examination, these tumefactions are found to consist of a chain of glands of different sizes and in various degrees of tubercular degeneration. They have not been met with as frequently as the isolated gland. They are often deeply seated behind the deep fascia of the neck, and they are difficult to deal with.

It may be laid down as an almost universal rule that a chronic abscess in the neck of a child, if not connected with bone disease, has its origin in a tubercular gland. Sometimes these abscesses are rapid in their formation, are accompanied by marked constitutional symptoms, the tissues of the neck are brawny, and much pain is complained of. This, however, is not the rule. Tubercular abscesses generally are slow in their formation and unaccompanied by any marked symptom but swelling.

These abscesses may form behind the deep fascia of the neck as a firm, well-defined swelling, and one in which no fluctuation can be detected. One side of the neck looks fuller than the other. The true nature of this may not be known until the deep fascia has been perforated and the abscess cavity entered. In other cases a large superficial abscess may be opened and no diseased gland found. If, however, careful search be made with a director on the floor of such an abscess, a small opening will be found in the fascia leading to a tubercular gland. The history of such a condition is as follows: An abscess has formed connected with a tubercular gland behind the deep fascia. After attaining considerable size a small opening is formed in the fascia, and the contents of the post-fascial abscess slowly empties itself through this channel into the subcutaneous tissue of the neck; finally, all the fluid contents of the deep collection of pus finds its way into the superficial abscess, the tubercular gland and abscess being connected by a sinus.

The importance of searching for such an opening is evident, for no cure can be accomplished until the contents of the deep-seated, diseased gland have been removed.

Treatment.—The medical management of tubercular glands is far from satisfactory. The general routine treatment with tincture of iodine is worse than useless. The indications are for *soothing*, not *stimulating*, applications. It is safe to say that painting with tincture of iodine tends to increase the tumefaction rather than diminish it. Poultices should have no place in the management of these cases; they make the skin sodden, and increase rather than retard suppuration. If an abscess has opened, they are worse than useless. Moist heat encourages bacterial growth, lowers the vitality of the skin, and favors undermining.

Rest to the neck, tonic treatment, change of air, if possible, the removal of any nose, throat, or ear trouble, and maintaining the scalp in a healthy condition, are the means best calculated to be rewarded by success in cases in which much tumefaction has not taken place. Tubercular deposits in the gland differ in no respect from those in other portions of the body. They follow precisely the same course, and should be viewed from the same standpoint.

It is perfectly useless to attempt to treat a tubercular gland that has attained any size by medication with the expectation of its cure. It will always remain a diseased gland, and, in the vast majority of cases, will eventually suppurate.

The best treatment for a tubercular gland is its enucleation. If removed before its contents have infected the surrounding tissue, it prevents the formation of an abscess; and if suppuration has taken place, an operation shortens its amount and duration by months, or even years, obviates unsightly scars, and prevents the infection of other glands. For these reasons the surgical management of this affection is to be advocated.

As to the question when an operation should be done it is always better to anticipate the formation of a peri-glandular abscess, and in order to do this, all chronically enlarged glands, of a tubercular nature, if of any size, should be removed, as by so doing time will be saved, and the scar resulting from the incision will only be linear and in time will be scarcely noticeable.

In regard to abscesses about the neck, the rule should be that they be opened, their cavity thoroughly curetted, together with any diseased glands, as soon as possible, and, above all, in no case should a poultice be applied.

The method of operating that in my hands has been proved satisfactory is as follows:

In Cases Unaccompanied by an Abscess.—After disinfecting the skin, an incision is made over the enlarged gland, if

there is only one, or over the most prominent, if more than one is involved, down to its capsule, the incision being, as a rule, not more than an inch or an inch and a half long. Into this cut the gland is made to protrude as much as possible by grasping it behind. If it is non-adherent, it can be separated from its loose connection by means of a director, or what is better, an artery needle used very much as strabismus hooks are used in enucleating an eye, working around the gland with the hook and a pair of blunt, curved scissors until the hilus is reached. If it has been thoroughly freed from all its other attachments, the gland can now be forced entirely out of the wound, its only attachment being at the point where the vessels enter. A cat-gut ligature is then applied around these and the gland cut away. Unless some vessel has been divided in the soft parts, there will be little if any hæmorrhage. If there are other diseased glands near the one removed, they can usually be reached through the incision already made. If, however, this can not be done, the incision can be enlarged or a new one made. It is often astonishing how much can be done through one opening.

If a gland is adherent, its removal is tedious and not safe; for such, the better plan is to open the capsule and thoroughly remove its contents with a Volkmann's spoon, leaving the capsule behind. If the capsule has been opened during the operation, or its contents have perforated it before the date of operation, infecting the surrounding tissue, the same plan can be adopted, only the spoon must be used freely over the whole extent of the abscess cavity; all diseased tissue *must be removed*.

In those cases where a number of small or moderately enlarged glands are matted together, and when from their situation there is danger of injury to important vessels or nerves, it has always seemed better to remove such as can be safely and easily done, thoroughly curretting the cavity of any abscess that may exist, dividing the capsule and removing the contents of as many diseased glands as possible without making large incisions and tedious dissections. In some of these cases the glands are so situated that their thorough removal is easily accomplished without any danger to other structures, while in others a formidable operation will be required to remove them. A good result has followed in all cases where this plan has been adopted, although a second and sometimes a third operation of curretting has been called for.

In old cases where abscesses have been allowed to pursue their natural course and sinuses exist, there is often found much tubercular tissue within their cavity. In such

cases a thorough curetting will effectually remove all infected tissue and a rapid closing of the cavity will result. Where the diseased gland is deeply seated and where there exists a superficial abscess connected with the gland by a small sinus through the fascia, the diseased gland can be easily removed by passing a small or moderately sized Volkmann's spoon through the sinus and curetting the gland. Unless this is done, the opening in the skin will not close until all infected tissue has been eliminated. After clearing out these cavities and glands as thoroughly as possible with a Volkmann's spoon, a moderate-sized sponge, dampened with mercury solution, is caught in a locked forceps and forced into the cavity and then turned around several times. This will remove and bring away any diseased tissue that may have been left by the spoon.

If the skin is thin, undermined, and unhealthy in appearance about a sinus, it is freely removed.

After the clearing process has been finished, the wound is well washed with mercuric solution (1 to 1000), then dried with a sponge and iodoform dusted in, and the parts brought together as thoroughly as possible with deep and superficial suture so as to leave as few "dead spaces" as possible. It will sometimes be found, however, that the parts can not be sutured so as to close entirely the deeper portions of the wound. In such cases the wound has been stuffed with iodoform gauze.

In regard to the skin wound, one of two methods has been adopted—either to close it with a subcutaneous catgut suture, or, if the abscess has been subcutaneous or the gland large and its removal has left a considerable subcutaneous cavity, the needle, armed with the suture, is passed from without inward some distance from the edge of the incision through the whole thickness of the skin into the cavity; then, on the opposite side of the cavity, from within outward to a corresponding point upon the other side, then back again, and repeated until a sufficient number of continuous sutures have been passed, the last ending on the side first perforated. The two ends are then tied tightly together, bringing the inner walls of the cavity in apposition and causing a prominent ridge on the neck. The advantage of this is that it helps to obliterate the cavity, and, when the catgut is absorbed, the skin assumes its normal position. It has been found to be no small gain.

In regard to drainage, for some time rubber drainage-tubes were used, but of late they have been abandoned. Their points of entrance were always slow in closing, and seemed to increase the amount of cicatricial tissue. In their place horse-

hair has been substituted, a bunch being held in place by the skin suture, its ends protruding from either extremity of the wound; it affords ample drainage. It is easily removed, and does not leave the cavity always seen when the rubber tubing has been used.

It is not to be supposed that in all cases of operation upon tubercular glands of the neck the wound closes up at once. In many, owing either to imperfect eradication of the diseased tissue, error in after-treatment, or new points of disease showing themselves, suppuration follows. Sometimes after the wound has closed it will break down again and discharge, or a sinus will persist, the edges of the wound assuming an unhealthy appearance. In such cases the wound must be reopened. It will then be found that the old cavity has refilled with tubercular matter and pus, a neglected gland having reinfected the parts; or, if no gland be found, it is due to diseased tissue that had not been removed; but, whatever its cause, unless the cavity is again cleaned out, no permanent benefit will be derived from the operation, and a sinus may continue to discharge for months.

In other cases, although the old point of disease may never give any trouble, new glands may become enlarged and call for another operation. Thus in one child I have operated ten times for the last four years. She has had no return, and is a perfectly healthy-looking girl.

The ultimate result after the surgical treatment of tubercular glands is that, if the gland is removed before a periglandular abscess has formed, the resulting scar will be linear and scarcely visible. If, however, an abscess has formed and the skin is much undermined and unhealthy, the amount of cicatricial tissue will be in direct proportion to the amount of diseased skin. In other cases, even in the presence of an abscess, a linear scar may be formed.

The following are the statistics of all cases operated upon:

Number of cases, 58. Of these 25 occurred in males and 33 in females.

Abscesses are mentioned in 20 cases, none existed in 28; not mentioned in 23. Age: Eleven patients were two years old; 11 were three years old; 3 were four years old; 5 were five years old; 2 were six years old; 6 were seven years old; 6 were eight years old; 1 was nine years old; 6 were ten years old; 4 were eleven years old; 1 was twelve years old; 1 was thirteen years old; 1 was fourteen years old.

The shortest time that the patient was under treatment was nine days; the longest, three years.

The duration of treatment was as follows: Fourteen patients were in the hospital less than three weeks; twenty were discharged at the end of a month, twelve at the end of two months, five at the end of three months, two at the end of four months, two at the end of five months, one at the end of six months, and one at the end of seven months; and two were under treatment for three years.

In the two patients who were under treatment for three years, in one ten operations and in the other eight were performed; some of them were for simple curetting, while on other occasions recently infected glands were removed.

In *two* cases only has there been any troublesome hæmorrhage, and this was in connection with masses of glands; during an attempt to enucleate them a vein of considerable size was torn, and for a short time there was quite a sharp hæmorrhage until the vessel was secured by a ligature. Care must be taken not to drag much on these matted-together glands.

After an operation the neck is well packed with bichloride gauze, secured by a firmly applied bandage. The horse-hair drainage is removed at the first dressing.

With glandular abscesses of the neck, simply opening the abscess and allowing the pus to escape is temporizing treatment; the cavity should always be curetted.—*N. Y. Med. Journal.*

CONSERVATISM IN SURGERY.

By EUGENE BOISE, M. D., Grand Rapids, Michigan.

During no period has surgery made more rapid or more notable advance than in the past ten or fifteen years. In every department the best and most earnest efforts of the brightest minds have been put forth. Operations undreamed of a few years ago are every day performed, and pathological conditions, universally considered incurable, are daily yielding to the surgeon's skill. In no department of surgery has there been greater advance than in gynecology. So rapid has it been that the attention of the professional world is turned toward it. And those voices which are not heard in admiration and encouragement are loud in condemnation.

In the treatment of many of the diseases of the pelvic viscera there has been a complete revolution. Not many years ago uterine fibroids were almost universally let alone or treated palliatively. Some, not satisfied with this, hoped much from the administration of muriate of ammonia or ergot. A few

attempted the removal by morcellation of those which were intra-uterine. Occasionally, when the extremity of the case demanded it, one, bolder than the others, removed the entire uterus as early as 1825. Electricity was tried as early as 1871, but fitfully and uncertainly, till Apostoli finally in the last six or eight years established it firmly as a rational and valuable mode of treatment. His teaching has been followed by a large army of pupils whose enthusiasm almost leads them to claim that it should supersede the knife. The laparotomist, on the other hand, is unable to see the benefits claimed, and pronounces even more harmful than useful.

Vaginal hysterectomy for fibroids was performed by Kottman and by Pean in 1882. Now the technique has been so perfected that in proper cases, no one whose knowledge keeps pace with the times hesitates to recommend it. Abdominal hysterectomy for fibroids was performed as early as 1825, and from that time at intervals, rare because of the extreme danger of the operation, till Koeberle's operation, December 19, 1863. He so perfected the technique and his published report was so complete, that the operation was established as fully justifiable from that time. Various modifications in the several details of the operation have been made from time to time. The elastic ligature was first employed by Kleiberg in 1876, modified by Martin in 1878, and is now used practically as then. Schroeder announced his intra-peritoneal method of treating the pedicle in 1878, and his method, unmodified in any important particular, is used by many operators to-day. In 1889 Martin advocated total extirpation of the uterus, and now this method is finding many enthusiastic advocates, the technique being gradually perfected till in ordinary cases it is comparatively free from danger. In 1876, Trenholme and Hegar each advocated castration for the cure of fibroids, and to-day, this is, in proper cases, the established method. Pozzi says it should be employed in every case where its performance is less grave than hysterectomy, and where the latter is not especially indicated by compression phenomena.

In the treatment of cancer of the cervix uteri, amputation of the cervix has been performed for more than twenty years, and now is being urged by many warm advocates as against total extirpation. It is not in order in this article to give even a résumé of the various arguments urged, but it seems that the majority is in favor of entire removal of the diseased organ. As summed up by Pozzi: "For my part, I think that total hysterectomy is preferable to removal of the cervix, even when the disease is circumscribed, for it alone gives security that the whole of the affected part

has been removed, and the mortality of the operation has been so far reduced that it does not materially exceed that of cervical amputation." In cancer of the cervix and body, total extirpation of the organ, by the vagina, is the only procedure advocated in suitable cases. Freund's description of his abdominal method in 1878 caused it to be generally tried, but the technique was so faulty that it fell into disfavor. Czerny, searching for a better way, advocated the vaginal operation in 1879. Since this time it has made very rapid strides in favor, the debatable ground now being whether to use clamps or ligatures to secure broad ligaments. Cancer of the cervix, extending to the vagina, was, till very recently, treated only palliatively. Pozzi, even, saying "this invasion is an absolute contra-indication to any radical operation." But within a very short time successful cases have been reported where the entire uterus with the upper third of the vagina was removed, the cases not only making good recoveries, but showing no tendency to a return of the disease. This, then, is taking its place among the curative possibilities.

In the treatment of retro-displacements the pessary has been the sole reliance of physicians for many years, and even now has its strenuous advocates, as against recourse to any surgical procedure. But conscientious gynecologists have never been satisfied. In December, 1881, Alexander made his first successful operation for restoration by shortening the round ligaments, not describing the operation till 1883. Adams made the same operation at about the same time. Their success caused a wave of excitement among those who were dissatisfied with the then prevailing incompleteness of all methods of dealing with these displacements, and it was tried everywhere with varying results, finally being given up by reason of the difficulty experienced in finding the ligaments. Recently Dr. Edebohl, of New York, has revived this operation in a modified form, which is so successful that it promises to become a standard operation. Other operators have sought to remedy these displacements in cases not suitable for the modified Alexander's operation, by fixing the replaced uterus to the abdominal walls. This was tried in various ways, and is still being modified as to technique, the principle remaining the same. Other methods of obtaining the same result have been advocated, but have not found general favor.

To remedy the distressing condition known as procidentia, efforts have been made, at least ever since 1825, when Marshall Hall performed what he even then termed colporrhaphy. In

1865 Sims described his operation, which has been the basis of the various methods of colporrhaphy practised since then. More recently the round ligaments were shortened for the purpose of retaining the procident uterus in its normal place, but failed. Finally the majority of good operators advocated and practised hysterectomy for the relief of the patient, but more recently the desired result has been obtained by the combined operations of amputation of the cervix, anterior and posterior colporrhaphy, perineorrhaphy, and fixation of the body of the uterus to the abdominal walls.

But it is in the treatment of diseased ovaries and tubes that the aid of laparotomy has been most frequently invoked, and has rendered almost incalculable service, notwithstanding its abuse by some unscrupulous or over-zealous operators. By its means has it been possible to study the pathology of pelvic diseases, and thus render diagnosis clear. By its means have conditions been rendered curable which only a few years ago condemned the woman to a life of suffering. But against no procedure has the clamor of unscientific criticism been greater. So great is it, that even now in every town and city, women are left to die from recurring pelvic peritonitis, and cellulitis—or pelvic abscess, unaided, when they might be restored to health if the physician had the courage to face unintelligent criticism. Laparotomy is justifiable for the cure of sterility when there is any reason to believe that it is caused by adhesions or occlusion of the tubes—even when the woman is free from pain and seems in perfect health.

Again, extra-uterine pregnancy, which was only occasionally recognized several years ago, is found, by means of the more accurate methods of diagnosis made possible by the frequent laparotomies, to be a condition by no means rare. And while formerly women died from collapse from some unknown cause, or at best were able to drag out the remainder of not very long lives in constant suffering, more or less severe,—now the knife brings life and health. As early as 1863 hypodermic injections of strychnine were employed to kill the fœtus. Later, morphine was used in the same manner, and even now finds ardent advocates. Electricity also, which has been used at intervals for several years, is now often employed even by skilled surgeons, in the hope that it will kill the fœtus and promote absorption—but they watch the case closely and hold themselves in readiness to perform laparotomy at a moment's notice.

This rapid advance toward perfection in diagnosis and treatment in these various branches, has been brought about by the earnest efforts of truly conservative surgeons, who have de-

voted their best energies to seeking some method by which the great rate of mortality in these various diseases might be lessened—men who appreciated their responsibility as conservators of the health and lives of their patients. True conservatism in surgery is the highest regard for the physical welfare of the patient with a proper regard for life. It calls for the skill in diagnosis, knowledge of the means possible for relief, and judgment as to the application of those methods. We have read frequent warnings from men qualified to speak, under the cry of conservatism, against the indiscriminate performance of these critical operations by men not thoroughly qualified. We hear, every day, criticism severe and unqualified, from men who are not competent to perform these operations, that such operations are unjustifiable and even criminal. Such criticism comes only from men who have made no effort to qualify themselves, either by education or observation, and who are content to wander blindly on in those methods of treatment which bring dollars to the physician but no relief to the patient—methods which are condemned by men who have earned the right to speak by the lives they have saved, and the suffering they have relieved. But true conservatism in surgery embraces more than that such operations as are now demanded by a due regard for the parent's life and health should not be attempted (except in emergencies) by one who has not qualified himself by thorough study and long observation of others.

The highest regard for conservatism demands that *all* means should be employed that will bring relief, with due regard to life. When a pathological condition exists that will surely result in death, any surgical procedure that gives a chance of life is conservative. When a pathological condition exists that will cause life-long suffering, any surgical procedure that will relieve that suffering without too great risk of life is conservative. Physicians should use all available means to qualify themselves to diagnose existing conditions. They should use all possible means to qualify themselves to use the most effective methods, surgical or other, to remedy those existing pathological conditions; and while conservatism in surgery demands that none should operate except those so qualified, it also much more demands that all means operative or other, shall be employed that are compatible with the best interests of the patient, without regard to personal or popular criticism. More lives have been sacrificed by that false conservatism that councils delay than by untimely resort to operation—*Physician and Surgeon.*

BLOOD IN THE URINE—HOW TO DISCOVER ITS SOURCE AND WHAT TO DO FOR IT.

By L. BOLTON BANGS, M. D., Surgeon to St. Luke's and Charity Hospitals; Consulting Surgeon to the M. E. Hospital, Brooklyn; Professor of Genito-Urinary Surgery and Venereal Diseases in the Post-Graduate Medical School and Hospital.

At the outset of this discussion I assume that the term "blood in the urine" refers to the presence in the urine of normal or intact blood-discs, and that no reference is to be made to that pathological condition known as hæmoglobinuria, or hæmatinuria. This condition, in which the corpuscles become dissolved in the blood, the hæmoglobin thus set free being excreted by the kidneys, is occasionally met with, but belongs to medical practice (strictly speaking) and is not pertinent to our subject. It must also be premised that blood in the urine is but one symptom, and may occur in many different pathological conditions. It is usually associated with other symptoms, but its mere presence is not associated with any particular lesion, nor do its characteristics determine definitely from which part of the genito-urinary tract it exudes. It is true that it is often the first symptom for which treatment is sought, and although it may be the most dangerous, it is not necessarily the most diagnostic one. We must still remember that although the hæmaturia may be the most prominent symptom, it is but one of the group. The blood in the urine is but one of the factors in the diagnosis of its cause. In quantity it may vary from a few drops to a very great volume, enough to jeopardize the life of the subject, and it may be persistent, continuously present, or intermittent. When intermittent, the intervals may be from a few days to several years. In my opinion, neither its color nor its quantity will enable us to decide definitely whence it comes. Writers have declared that when the blood in the urine is bright red in color it indicated hemorrhage from the bladder; and when it was blackish or deeply intermingled with the urine, it indicated renal hemorrhage. But in my observation the color alone does not indicate its source, for in some lesions of the bladder we often have blood which is thoroughly intermingled with the urine, and the latter may be as black or deep in color as the urine, which comes from the kidney. And on the other hand, I have seen bright red blood, sufficient in quantity to coagulate in the bladder, come from the kidney.

Blood may find its way into the urine from any of the anatomical divisions of the genito-urinary tract, or from one or more of these divisions at the same time. I believe, from my own observation, that blood in the urine from a source in the

urethra may be overlooked. It is not sufficient to say that a "urethrorrhagia," whether from a traumatism or otherwise, is diagnostic in itself, for I have seen a sequel of gonorrhœa in the urethra permit blood to exude which escaped only with urination; nor is it enough to say that blood from the urethra will find its way out in the intervals of urination, and has no relation to the act. Blood can escape from this canal during the act of urination. The physiological action of the urethra may cause blood to escape from a diseased area sufficient in quantity to be commingled with the urine as the latter passes, and there be no appearance of it at any other time. The history of antecedent or present urethritis and the absence of bladder or kidney symptoms, together with the fact that the blood is comparatively minute in quantity relative to the amount of urine, will lead us to suspect the urethra as the source of the hemorrhage, but the endoscopic tube will make the diagnosis definite. Just here permit me to suggest two cautions which may be trite and puerile to you, but as I have seen it necessary to eliminate this troublesome symptom, I will remind you that sometimes the tube, when introduced into an inflamed urethra, especially if it be made to enter the membranous or prostatic portions, may press blood out from a hyperæmic locality. Also it must be remembered that in some individuals a granular or subacute urethritis, in the bulbous portion of the urethra, will so irritate as to cause the frequent and urgent calls to urinate which we are apt to associate with lesions of the posterior urethra or neck of the bladder. Without the use of the tube in such a case we might be led to consider the bladder as the source of the hæmorrhage. I think I can appeal to your experience that this has at times puzzled your diagnosis. Of course the treatment of the diseased urethra will in such cases cure the hæmorrhage. The diagnosis of hæmorrhage from the urethra, in any of its parts, due to traumatism, surgical or otherwise, is determined by its cause and in its treatment is subject to ordinary surgical principles.

That the ureters may furnish blood for admixture with the urine as it traverses these canals there can be no doubt, as any one who has ever witnessed the effect of an impacted calculus will admit; but as the pathological conditions of the ureters are so frequent and so obscure, I will limit my part of the discussion to the differential diagnosis between bladder and renal hæmorrhage.

The answer to the question as to whether the source of the hæmorrhage is in the bladder or kidneys is often a very troublesome one. It introduces points of great complexity, and sometimes, indeed, the hæmorrhage may be found to be

from both the bladder and the kidney. We may say, in general, that hæmorrhage from the bladder is much more abundant, more likely to clot, more persistent, and, when intermittent, with shorter intervals than that from the kidney. It is usually associated with some symptom irritability or inflammation of the bladder, and also with some evidence of a lesion, ascertained by an exploring instrument or by bimanual palpation. The exploring instrument may detect enlargements of or projections from the prostate; it may detect, but not definitely determine, the presence of growths from the walls of the bladder, and it may detect the presence of stone or foreign bodies, but minute granulamata, soft papillomata, tubercular ulcers—all of which I have seen in my experience cause free hæmorrhage—may entirely elude any instrument guided by the sense of touch. Fortunately, we are now able to bring to our aid another sense. With the cystoscope we are able to see the lesions, and make a differential diagnosis, and are able also to determine whether the blood comes from the bladder, kidney or kidneys. But cases will occur in which we can get no help from the latter instrument, or in which it may be necessary to supplement the evidence furnished by it. We sometimes have cases of insidious disease of the bladder which give no objective symptoms other than abundant and dangerous hæmorrhage. I have had a case of (recurrent) papilloma of the bladder in which there was absolutely no symptom until the occurrence of the repeated and prostrating hæmorrhages. Furthermore, the hæmorrhage was so abundant, and the blood was so rapidly and deeply intermingled with the urine, that the cystoscope gave no aid in the diagnosis. In this case the diagnosis was made, first by determining the fact with the searcher that a foreign body was present upon the right side of the bladder; secondly, that the exploration of the bladder with the searcher increased the hæmorrhage, and thirdly, when the bladder was emptied with the catheter and the last portion of its contents allowed to drain into a separate glass, this was noted to be redder in color and to contain more blood than the other portion of the fluid. The bladder was then washed repeatedly with an antiseptic solution, and at no time did the fluid return from the bladder without being tinged with blood. Each time, as the bladder emptied itself, it seemed to drain blood from the neoplasm directly into the catheter, and the last portion of the fluid was always darker than the first. In this case, the incision into the bladder and the removal of the tumor by the supra-pubic route of course instantly stopped the hæmorrhage.

It has been my experience with the cystoscope, which, in spite of its occasional failures, should be regarded as an in-

strument of precision, to observe that hemorrhage from the kidney is rarely so rapid and abundant as to obscure the fluid medium in the bladder. Hence, if this does take place, in a given case, it may be regarded as one of the diagnostic points in favor of the lesion being in the bladder. But if the case which is presented for diagnosis has no symptoms of disease of the bladder other than the hæmaturia, it will not do to assume that therefore the blood comes from the kidney. There can be no question that the latter—one or both of them—may supply an enormous quantity of blood, and sometimes without any particular effect upon the general well-being of the subject. Physiological and pathological facts both demonstrate this, but inasmuch as the question of treatment of the symptoms involves the removal of the cause, we should carefully, studiously, and in order examine each of the organs from which the blood may come. Associated symptoms give valuable aid in determining the source of the hæmorrhage to be in the kidney, and when obscure or not present at the time of the examination, must be carefully sought for.

Lumbar pain, associated with blood in the urine, is a frequent accompaniment of lesions of the kidney. It may be only vaguely like the intensely severe colic which accompanies the passage of a renal calculus, but, especially if it be unilateral and minute clots be found in the urine, it is plainly valuable in locating the lesion. Manual exploration may also reveal in the kidney region the presence of a distinct enlargement or of an indefinite fulness, or of mere tenderness, but I will admit that these signs are not always present, and are not easily ascertained. Individuals vary so in the amount of adipose tissue about the kidney that no positive conclusion either way (for or against) can be drawn from the two latter symptoms alone, and it is only as one or both form part of a group that they are valuable. It should be stated here that a movable or floating kidney may be the cause of blood in the urine, and its investigation should not be omitted in a doubtful case. The microscopic examination of the urine which, "it goes without saying," is a matter of course in all genito-urinary cases, gives especially valuable aid in suspected kidney lesions by informing us of the presence of casts, crystalline and granular material, tissue of neoplasms, and epithelium. Important differential evidence is furnished by the "catheterism en deux temps," suggested, I believe, by Guyon, with which I suppose all surgeons are familiar, and to which reference has already been made. The fallacy in it, against which we must carefully guard, is that blood may trickle into the bladder from the ureters, coagulate and

be delivered at the end of the catheterization, stimulating the bleeding from a vesical neoplasm. I have been led to multiply the washings, and to add the device of pressure over each kidney and ureter in turn between the washings. Thus: The catheter is passed, and the last portion of urine gathered in a separate glass. The color and characteristics of this small quantity are noted, and the glass numbered and set aside for microscopic examination. The bladder is then thoroughly washed, emptied, and the last few drops of fluid separated in another glass. The bladder is again washed, emptied, and the catheter allowed to remain a few moments, while deep, bi-manual pressure is made over (for example) the right kidney and along the course of the right ureter. The fluid, which escapes slowly, and often only in drops, is also gathered in a separate glass, and set apart for microscopic examination. The bladder is again washed, and the manœuvre repeated with the left kidney and ureter. If the small amount of fluid which is gathered under these circumstances is tinged with blood, the strong probability is that it comes from the kidney, and subsequent microscopic examination of the fluid may convert this probability into certainty. This procedure may not be unfamiliar to you, but I was led to employ it by observing in two cases of pyelo-nephrosis that, after thoroughly washing the bladder, purulent fluid could be made to spurt from the catheter (*in situ*) by pressure over the diseased kidney. I may add that one of these individuals learned the art of emptying his kidney (so to speak) and gained so in well being that he positively refused operation. The following somewhat complex case illustrates some of the points, and I beg leave to quote it briefly.

A gentleman, aged forty-six, intermittent attacks of hæmaturia in eight years, lasting a few days at a time. For the past three weeks profuse and persistent hæmorrhage. He noticed that the first gush of urine contained bright red blood, then the stream grew darker, and finally became a deep smoky color. No frequency of urination; no pain associated with the act of urination; no lumbar pain; no lumbar enlargements or tenderness. History of urethritis and subsequent attack of frequent and painful urination. Genral condition was depreciating. Confinement to the house, and the taking of ergot, etc., made him complain of feeling wretched. Locomotion did not increase the amount of blood, nor cause pain. The introduction of a soft catheter was attended with some difficulty in the posterior urethra, and as it entered the neck of the bladder he complained greatly of pain, and immediately there was a gush of bright red, clotted blood, followed by very dark

colored smoky urine. I thought at first that I had to deal with a neoplasm at the neck of the bladder, especially as per rectum there was tenderness and a sense of fulness in this region. The washings, as detailed above, were then undertaken, and the drainings of each few moments were always tinged with blood. Microscopic examination of his urine showed free blood, a small amount of pus and epithelium; and of the drainings, free blood and a cast. Treatment of the posterior urethritis, to which the pus could be referred, relieved the pain and difficulty of introducing instruments, and exploration with the cystoscope (more than once) showed a normal bladder and bright red blood exuding from the left ureter. This was evidently in sufficient quantity to coagulate at the base of bladder and be expelled with the first contraction of the viscus. The presence of a normal bladder, and the absence of signs of abscess, neoplasm (including tuberculosis), or calculus in the kidney or its pelvis, which at the end of eight years ought to be manifesting themselves, led me to consider the cause of this man's hæmorrhage as congestion, due possibly to some form of toxæmia. The examination of blood taken from his finger revealed the presence of "plasmodium malarie" in abundance. All instrumentation was stopped and his hæmorrhage ceased abruptly under the administration of tincture of hamatilis, followed by quinine.

Of course, cases might be multiplied which would indicate the difficulties of diagnosis, but these are familiar to you, and it would only be a waste of time to attract your attention to them.

The second part of the question, namely, "What shall we do for blood in the urine?" is so directly connected with the treatment of its cause that we are immediately led to ascertain upon what pathological condition in the genito-urinary tract its presence depends. Here it must be said that in the time allotted it would be impossible to present these in detail, nor would it be practical, for I think our minds may be led to valuable results by considering the subject in a general way. The question involves often the treatment of the symptom as well as the removal of its cause.

The comparatively small amount of blood which escapes with the urine during an attack of gonorrhœal cystitis is, as a symptom, of little consequence, and it is only necessary to say to you that the treatment of the cystitis itself will cure the hæmaturia. But in the old man, with prostatic hypertrophy, who is bleeding profusely into his own bladder, the latter, perhaps, distended with clots and urine and making the most agonizing and violent contractions to expel its contents, the

condition is entirely different. Here the shock of the loss of blood is added to by the violence of the suffering, and the question as to what shall be done is an exceedingly delicate one. Sometimes the very act of relieving a retention, and thus putting the bladder at rest, will stop the hæmorrhage. Sometimes again, the quieting of the expulsive effort of the bladder by the use of opium (morphia) relieves the congestion (because, as you remember, on account of the anatomical arrangement of the vessels of the bladder, the more the bladder contracts, the more blood is retained in its veins) and stops the hæmorrhage, and the clots that have accumulated in the bladder, becoming softened by the urine, are expelled in the form of magmata. My own impression is that in these cases catheterization should be avoided as far as possible, for it is in the knowledge of all surgeons that the introduction of infectious material into bloody foci very readily induces decomposition and sets up inflammation which may be far-reaching in its effects. Hence catheterization should be done under the most scrupulous antiseptic precautions and only when it becomes absolutely imperative to relieve the intense suffering of the patient.

The question then arises, when the catheter is imperative, as to what to do with the clots. In some cases I have looked upon the presence of the clots as conservative; that is to say, the pressure of the clot, plus the contractile efforts of the bladder, has seemed to control the hæmorrhage. But where the bladder is not comforted and quieted by the relief of the retention, and the clots are still present, it is evident that the bladder resents their presence, and of course the expulsive efforts of the bladder, by maintaining the congestion, add to the hæmorrhage. The removal of the clots, then, in order to quiet the bladder, is in itself a hæmostatic procedure. I must withhold my approval of the injection of pepsine or peptonizing solutions of any kind into the bladder under such circumstances. Such materials easily decompose. They can scarcely be rendered so aseptic as to not run a very great risk of adding to the bloody contents of the bladder septic material. Hence I prefer to break up the clots either by the aid of some instrument, such as the lithotrite, or by careful and frequent ablution with an antiseptic solution to remove them gradually, or to reduce their volume to such an extent that the bladder itself can expel them. Should the hæmorrhage continue and not be controlled by dilute astringent injections, one of the drainage operations, preferably by the perineum, may be undertaken.

The hyperæmia (congestion) of the bladder due to the presence of foreign bodies, including calculi, sometimes causes

hæmaturia. It may be modified, and the hæmorrhage stopped by rest in bed, careful ablution, and, if need be, the injection of dilute astringents (tannin, 2 to 1000; zinc sulph., half grain to the ounce) not strong enough to irritate the bladder and cause its contraction, nor to form clots, until such time as in good judgment the foreign body can be removed.

In the case of neoplasms, whether benign or malignant, it seems to me that we can hardly wait—certainly not for any length of time—to counteract the symptoms, for as a rule, when the cases present themselves to us, they are suffering largely from the effect of the loss of blood, that is to say, acute anæmia. In my opinion, good judgment requires that we shall proceed to open the bladder by way of the supra-pubic route and remove the neoplasm, if need be with a resection of a portion of the bladder, as speedily as possible.

As to the methods by which foreign bodies, such as calculi, should be removed, I have elsewhere given my opinion, and only refer to them now when they are causes of hæmaturia. When it has been definitely ascertained that the source of the hæmorrhage is the kidney, another series of questions are presented to us for solution.

In hæmaturia due to traumatism of the kidney, such as result from falls or blows upon the renal regions, and where the associated symptoms are those of collapse and other evidence of excessive loss of blood in or about the kidney, I would advise unhesitatingly an incision, either lumbar or abdominal, which will give access to the great vessels of the kidney, and ligation of them. Records show the death-rate following traumatism and rupture of the kidney to be very high; and that it is usually due to the loss of blood, and not to the loss of function. It has been demonstrated that the kidney receives a supply of blood, moderate to be sure, from other vessels than the renal artery, sufficient at least to maintain the life of the kidney for a time long enough to enable the other kidney to accommodate itself to the increased demand upon it.

If the history points to the presence of a retained calculus in the kidney, that is to say, recurring lumbar pain, preceded, accompanied, or followed by the hæmaturia, and if the cystoscope locates the source of the hæmorrhage, a judicious nephrotomy may be done and extraction of the calculus, if possible. It may be proper to say here that it has occurred to me, from failures of my own and from failures I have observed in the practice of colleagues to find stone in the kidney, that a wider incision through the kidney may be with safety and propriety made than I, at least, have been willing to make. Some investigations by F. Degneu fortify me in this belief.

Hæmaturia due to neoplasms or tuberculosis of the kidney presents a question which I think must be determined by the individual cases. Roberts has shown, and with him accord the French observers, that with carcinoma of the kidney the duration of life is just about as long in the cases which have hæmaturia as in those which have not, and I am led to the conclusion that the hæmorrhage alone is not a positive indication for a nephrectomy. The growth of the tumor, pain, the danger of infection to the rest of the body, and the possibility of the prolongation of life, provided always that the other kidney is normal, must lead the surgeon to decide whether nephrectomy should be performed or not. I think the same considerations apply to the individual in whom is developing a tubercular kidney. It is an interesting fact that the autopsy rooms show that not only have purulent foci in the kidney, but tubercular ones also, been surrounded by a protective capsule, and the individual passed a moderately comfortable and lengthy existence, somewhat handicapped, to be sure, by a more or less degenerated kidney.—*New York Medical Record*.

URINARY INFECTIONS.

The urine contained in the bladder the kidneys of a man in perfect health is aseptic. The urethra is normally inhabited by germs which may contaminate the urine in its passage outward. The microbes of the urethra are bacilli and micrococci, inoffensive under some circumstances, pathogenic in others. The *staphylococcus pyogenes aureus* is one of these micro-organisms of the urethra. Purulent urine, from an inflamed urethra, bladder or kidney always abounds in micro-organisms: among these are especially to be mentioned the *staphylococcus aureus*, *albus* and *citreus*, the *streptococcus pyogenes*, the *uro-bacillus liquefaciens septicus*, and the *bacillus non-liquefaciens*. The latter, says Guyon, has a preponderant rôle in urinary infections, Halle and Albarran describes it under the name of *pyogenic bacterium*, Guyon thinks it identical with the *bacterium coli commune*.

These microbes may exist in morbid urine either singly or associated; two, three, or more species infecting the same bladder. The gonococcus of blennorrhagia and the bacillus tuberculosis are also met with in the urinary passages under circumstances of specific infection.

The micro-organisms found in purulent urine are to be regarded as the agents of the suppuration which they accompany. This appears to be a fair inference from all the facts

which have been accumulated by a multitude of observers the past thirteen years. All these progenic bacteria have the property of producing pus in the subcutaneous cellular tissue; all are capable of causing cystitis; the injection of their pure cultures into the bladder under circumstances of temporary retention, or traumatism of the mucosa, provokes suppurative cystitis.

The micro-organisms may find access to the urinary apparatus in two ways; they may come from the outside environment and penetrate the urethra, ascending to the bladder and kidneys. This is direct primary infection, and is the rule. In other cases, the organism is first infected, and the kidneys are secondarily infected through the blood.

Spontaneous infection of the bladder in man does not exist (Guyon). In woman this is often observed, owing to the shortness of the urethra and feeble occlusion.

In the pathological state, spontaneous infection is frequent in both sexes. Septic inflammation of the urethra propagates itself to the bladder. Oftener, still, the infection is provoked. The bladder is contaminated by a urethral injection by the introduction of a septic sound or catheter.

Whether the bladder may be infected by an aseptic catheter introduced through a normal ureter may, practically be answered in the negative. The accidents of catheterism have, in fact, virtually disappeared, since sterilized instruments have been used.

Secondary infection of the urinary apparatus belongs to the pathological history of general infectious diseases. It begins with the kidney by one of those infectious nephrites described by Bouchard, and generally remains limited to this organ. Rarely it causes secondary cystitis by taking a descending course.

The penetration of the microbes into the bladder is one condition, but not the only condition of its infection. There must first be receptivity. Receptivity is created by diverse causes. The most active are distention of the bladder, stagnation of the urine, traumatisms of the mucosa, neoplasms. In order that the bladder may be contaminated some lesion, or at least stagnation of the urine, seems necessary. Microbes are often introduced into a normal bladder without, thereby, infection taking place; the first flow of urine sweeps them all away before they have time to begin their pathogenic action.

According to experiments of Guyon and Albarran, the injection of microbes into the bladder of a healthy animal is generally unattended with any morbid effect; but if you add retention from any cause, or if you wound and inflame the mucous membrane, infectious cystitis sets in.

As to how the microbes produce suppuration in the bladder—this is probably brought about directly by virtue of the pathogenic properties of the microbes (Guyon).

When suppuration is established in the bladder, it may long remain localized in this organ; this may be said to be the rule with cystitis. But cases are only too numerous where the pathogenic agent ascends along the ureter to the kidney, infecting that organ, producing a radiating nephritis, suppuration, and all the lesions of the surgical kidney.

The experimental demonstration of the pathogenic action of the microbes of the urine on the kidney has been fully given. The injection of a pure culture of these organisms into the ureter, followed by ligature of that duct, constantly produces in the animal all the lesions of ascending suppurative nephritis. One of the most interesting portions of the little treatise of Albarran (*Etude sur le rein des urinaires*) is the chapter where he details these experiments. The microbes whose culture was made the material of experimentation were the bacterium pyogenes, the staphylococcus aureus and streptococcus pyogenes. The animal selected was the hare; the left ureter was chosen, as being more accessible than the right.

By the side of suppurative pyelo-nephritis, of infectious origin, we must mention certain sclerous nephrites without suppurations whose microbial origin has been demonstrated by the histo-bacteriological study of the kidney in man. In certain cases, these sclerous inflammations follow experimentally simple ligature of the ureter practised without antiseptic precautions. The principal feature of pathological histology is the enormous proliferation of connective tissue, the nodulated, shrunken condition of the kidney in advanced stages. In the human subject, renal sclerosis is a frequent result of obliteration of the corresponding ureter by a calculus or tumor; it has been witnessed in connection with prostatic disease (Albarran).

Guyon affirms that it is of the first importance to remember that it is the stagnation of septic urine in the bladder that favors the ascension of microbes to the kidney, and that on the regular and repeated evacuation of the bladder depends, before all, the fate of the kidney. Suppuration of the bladder is of little consequence as compared with renal suppuration; the latter is always accompanied by serious disturbances of the general health, while the former may long exist without serious constitutional damage.

With regard to the pathogeny of the general accidents of infection, and of urinary fever in particular, the necessary condition for the appearance of these accidents is the infection of

the urine joined to the existence of a solution of continuity pathological or traumatic.

These accidents may appear spontaneously without any provocation; generally, however, they come on as the sequel of a surgical operation, catheterism simple or traumatic, urethrotomy, etc.

It is to the absorption of the septic urine (microbes and the toxic products which they elaborate) that we must refer the urinous fever. The presence of urinary microbes (the pyogenic bacterium alone or associated with the suppurative staphylococci and streptococci) has been noted both during life and after death in the blood of patients suffering from urinous fever. Albarran has found both the *bacterium pyogenes* and the *bacillus liquefaciens* in the blood at the outset of a child.

Experimentation has proved the infectious nature of the urinary accidents. The injection of a pure culture of the microbes habitual to morbid urine (*bacterium pyogenes*, *urobacillus liquefaciens*) into the serous cavities, pleura and peritoneum, generally causes the speedy death of the animal; at the autopsy the micro-organism is found diffused in the blood and all the organs. Injection into the blood produces the same general infection, and often also infectious nephritis.

Nothing can be more interesting than the chapters in Albarran's monograph in which he details the numerous experiments which he has made on animals, producing in them the entire symptomatology and lesions of urinary fever and infectious nephritis; experiments which an anti-vivisectionist sentiment would doubtless denounce, but which are fruitful in the addition of positive data to our knowledge. These results have been also admirably summed up in the exhaustive paper read by Professor Guyon to the recent French Congress of Surgery: "On the Pathogeny of the Infectious Accidents in Urinous Diseases," a paper from which we have freely borrowed.

This secondary localization in the kidney of the infectious agent which has entered the blood under circumstances above mentioned plays an important rôle in human pathology. There is no more formidable complication and termination of urinary diseases than this secondary infectious nephritis with its cortical miliary abscesses; it is called by Albarran and Guyon "descending nephritis" to distinguish it from the ordinary form where the infection is caused by ascent of the microbes from the bladder and ureter.

"We must," says Guyon, "admit along with the direct action of the microbe that of the toxic products which it elaborates in the urine of the bladder. These soluble products

becoming absorbed are capable of giving rise to fever and the general constitutional symptoms, even when the microbe is not absorbed and diffused. The acute, grave form of urinary fever is due, assuredly, to true microbic infection of the blood. It is in these acute, fulminant, rapidly fatal forms that the presence of the micro-organism has been most often noted in the blood. At the same time, the appearance, so rapid and almost instantaneous, in some cases, of febrile accidents following repeated micturitions through a urethra which is the seat of leison, their very short duration, their complete disappearance, justify the belief that a part of the symptomatology is due to soluble products. In these cases the victory of the organism when it is complete, is, among other conditions, due to the healthy state of the kidneys. In those rare cases where death supervenes quite suddenly and with symptoms of great intensity, it is to the massive dose of the microbes absorbed and to their great virulence that we must attribute the fatality. Acute, prolonged urinary fever, with repeated attacks, indicates that the infection of the blood has been followed by secondary renal lesions. This is the theory which I maintained before the demonstration of the microbic nature of urinary poisoning, and which has always seemed to me to result from the interpretation of the facts. The renal lesions may get well in a considerable number of cases. It is, at the same time, the persistence and the profoundness of these lesions which cause death when it supervenes in the course of this grave form of urinous fever.”
—*Boston Medical and Surgical Journal*.

OBSTETRICS AND GYNECOLOGY.

SOME ASPECTS OF GONORRHOEA IN WOMEN.

By CHARLES P. NOBLE, M. D., Philadelphia.

Gonorrhœa in women is such a broad subject, and one of such great practical importance, that in this paper I shall not attempt to cover the whole of it, but shall confine myself to certain points in its natural history and treatment. Prior to 1873, when Noeggerath published his celebrated paper, our knowledge of the natural history of the disease was very incomplete, and no adequate conception of the relation of gonorrhœa to endometritis, salpingitis, and peritonitis existed. Fortunately for medicine and for humanity, Noeggerath took

a most radical position with reference to the serious nature of gonorrhœa in women, and especially in regard to its relation to chronic pelvic inflammation and to sterility. His apparently exaggerated conclusions naturally forced the subject upon the attention of the profession, and since that time our knowledge of it has been growing steadily, until now it is quite satisfactory, although far from complete.

Gonorrhœa of the Uterine Appendages and Peritoneum.

—An interesting phase of gonorrhœa in women is the invasion of the womb, Fallopian tubes, ovaries, and the peritoneum. It has long been known that this extension of the disease does occur, and very exact observations were made forty years ago by Bernutz concerning the manifestation of the disease in the uterine appendages; but the real frequency of this form of gonorrhœa was not appreciated until demonstrated by the daily work of the modern abdominal surgeon.

The following case well illustrates this phase of gonorrhœa:

Mrs. X., aged 21, mother of one child, consulted me in June, 1891, having a relaxed vaginal outlet, a lacerated cervix and a vaginal cyst behind the cervix. She had no vaginal catarrh, nor was there a history of any. She was admitted to hospital July 24, and the cyst was removed and the cervix repaired. She was discharged August 7, and abstained from sexual intercourse for a month. On the 10th of October she consulted me for leucorrhœa and irritation about the vulva. Examination revealed nothing. On the 24th the left vulvo-vaginal gland was found inflamed, but not suppurating, and an acute endometritis existed. October 29 the inflammation spread to the peritoneum and a moderately severe pelvic peritonitis followed. The evidences of pus formation increased, and on November 9 her condition was such as to necessitate cœliotomy. Both Fallopian tubes contained creamy pus, and in addition a localized abscess was found to the left of the sigmoid flexure and extending down into the pelvis, containing several ounces of pus. With irrigation and drainage she recovered. The husband confessed to me that while his wife was in the hospital he contracted gonorrhœa (a mild case) and that he infected her.

Here was a woman, free from genital catarrh, who contracted gonorrhœa of the cervix and vulvo-vaginal gland, with little if any involvement of the vagina. It spread promptly to the tubes and caused a large collection of pus within the peritoneum. Unfortunately the pus was not examined bacteriologically, but clinically the occurrence of an intraperitoneal abscess as the result of gonorrhœa is clear.

How the disease is spread to the Fallopian tubes, ovaries

and peritoneum is yet in dispute. Before the discovery of the gonococcus of Neisser it was sufficient to say that catarrhal inflammation spread by "continuity of tissue." But this gross statement no longer is satisfactory. After the discovery of Neisser's coccus it was assumed that the spread of the disease to the tubes, ovaries and peritoneum was due to the invasion of this coccus. The earlier studies of the nature of the gonococcus, especially by Bumm, were opposed to this assumption in its entirety, the exceptions being explained by the theory of "mixed infection." From experiments made by Bumm it was maintained that the gonococcus is incapable of producing peritonitis, and also that it does not invade the deeper layers of the mucous membrane, the underlying tissues, or the lymphatics. The correctness of this theory is open to suspicion, because it does not explain the conditions found by the clinician, who is inevitably driven to the conclusion that the theory is based upon insufficient or misinterpreted evidence.

Gonorrhœal peritonitis, gonorrhœal ovaritis and ovarian abscesses, and gonorrhœal rheumatism involving various joints, have been and are accepted as facts by clinicians; but, according to Bumm's teaching concerning the gonococcus, these conditions are denied or are incapable of explanation. The fallibility of Bumm as an observer is supported by his teaching concerning the frequent relation between gonorrhœa and parametritis, the occurrence of which he explains by the theory of mixed infection. Certainly the combined testimony of English and American gynecologists goes to show that parametritis is an extremely infrequent complication of gonorrhœa—observers of the widest experience denying its existence apart from the puerperal state.

The more recent studies of Wertheim* have led him to conclusions which agree with clinical experience. He was able to demonstrate that the gonococcus will produce peritonitis in white mice. As the mucous membranes of white mice are refractory to gonorrhœa, while those of man are susceptible, he argues that this fact goes far to show that the gonococcus can produce peritonitis in man. He has demonstrated also that the gonococcus can penetrate pavement as well as cylindrical epithelium. He claims that the gonococcus can penetrate the connective tissue and infect the lymphatics, and thus cause peri-urethral abscess, suppurating lymphatic glands, etc. Moreover, Wertheim has demonstrated gonococci in the pus from ovarian abscess.

These observations of Wertheim are more nearly in accord with the known clinical history of the disease (illustrated in

*Proceedings of the German Gynecological Society, 1891.

the case reported), and are further supported by the fact that he and other observers, including Sinclair, lay stress upon the statement that other pyogenic bacteria are seldom found in tubal pus (Wertheim has found only the gonococci).

The result of the observations of Wertheim is very gratifying, confirming, as they do, Neisser's claim that the gonococcus is the specific cause of gonorrhœa, while harmonizing the experience of clinicians and bacteriologists concerning the disease. If Wertheim's observations are confirmed, gonorrhœal ovaritis and abscess, peritonitis and rheumatism receive a satisfactory bacteriological explanation.

Non-cystic Gonorrhœal Salpingitis.—Nothing in the history of gonorrhœa is better established than the essential chronicity of the disease. In the urethra, the vulvo-vaginal glands, the vagina, the uterus and the Fallopian tubes, the general facts are the same—the disease has little if any tendency to undergo a spontaneous cure. The rule is that a chronic catarrhal condition succeeds the acute inflammation (if the disease has not been chronic, or “creeping,” from the beginning), and that in some fold of membrane, crypt or follicle, enough of the specific poison remains to set up acute inflammation anew. The knowledge of this fact we owe to Noeggerath more than to any other; but each practitioner learns to know it from his own observations. And not only is the disease essentially chronic in its nature, but it is very rebellious to treatment. Even where the affected membrane is accessible, as in the urethra and vagina, after a long and systematic employment of germicides and astringents the practitioner is chagrined to find a recurrence of acute inflammation. And this is even more true where the comparatively inaccessible endometrium is involved.

The natural history of tubal gonorrhœa is still somewhat unsettled. Does gonorrhœal salpingitis ever result in a perfect natural cure with a functionally active tube? This is a point of the utmost importance because of its bearing on the proper treatment of the class of cases in which we have gonorrhœal salpingitis with but slight symptoms, and the class who have survived acute salpingitis with peritonitis and who have chronic salpingitis with adherent appendages. The known chronicity of the disease, and its rebelliousness to treatment in accessible regions, offer but little encouragement to expect a perfect cure in an inaccessible tube from which drainage is difficult, if not impossible. But the question is of such vital interest that facts, and not mere theoretical considerations, are needed to determine it. Personally I know of no case in which a gonorrhœal salpingitis has been perfectly cured. Perhaps this question will be determined definitely by those who are free-

ing adherent appendages instead of removing them after performing abdominal section. If it can be settled in the affirmative it will enable conscientious men to advise all manner of palliative treatment in such conditions in the hope of affecting a cure. In the meantime I believe that the rule of practice should be to remove all such uterine appendages when the health of the patient is compromised by their presence. At the present time there is no evidence that a Fallopian tube occluded at the fimbriated extremity ever becomes patulous; and there is every reason to believe that gonorrhœal salpingitis invariably produces occlusion of the tube, except in those cases where the infection spreads quickly to the peritoneum and induces rapidly fatal peritonitis.

Shall both Uterine Appendages be removed when only one is infected with Gonorrhœa?—The rule in ovariectomy for a cyst, that the opposite ovary should not be removed if found healthy, has been applied to the operation of removing the Fallopian tube and ovary for inflammation. Tait has called attention to the fact that in a considerable percentage of such cases the inflammation spread subsequently to the opposite side, causing death or requiring a second operation. Confirmatory testimony has been offered by others. Hence the conclusion can be drawn safely that when one uterine appendage has been removed for inflammation the disease is likely to attack the other appendage subsequently.

In operating upon women, the mothers of families, and who are approaching the menopause, it is certainly wise surgery to remove both uterine appendages, even though one is healthy. With young women desirous of bearing children it seems to be that, the facts being stated, the women themselves should elect whether one or both appendages should be removed, as they alone must suffer the consequences of success or failure.

Probably the percentage in which extension to the healthy side will occur can be materially reduced by appropriate treatment. When life is not threatened, careful preparatory vaginal treatment will do much in this direction by curing a lurking vaginitis. When endometritis is marked, rest in bed until recovery is perfect from the cœliotomy, followed by thorough dilatation, curetting and disinfection of the endometrium, should likewise lessen the chances of infection by curing the endometritis. Among intelligent people such measures, together with prolonged treatment to restore tone to the pelvic vessels, rational personal hygiene, and the avoidance of exposure, exhaustion, sexual intercourse and other causes of pelvic congestion, should go far to prevent involvement of the remaining uterine appendage.—*American Jour. of Obstetrics.*

MORTUARY REPORT OF NEW ORLEANS.

FOR FEBRUARY, 1893.

CAUSE.	White	Colored...	Male.....	Female...	Adults	Children..	Total
Fever, Yellow							
“ Malarial (unclassified)....	1	5		6	5	1	6
“ Intermittent							
“ Remittent	2	2	1	3	3	1	4
“ Congestive.....	5	1	3	3	4	2	6
“ Typho	1		1		1		1
“ Typhoid or Enteric.....	1	1	1	1	1	1	2
“ Puerperal							
Influenza.....	17	10	13	14	24	3	27
Scarlatina							
Measles							
Diphtheria	2		2			2	2
Whooping Cough							
Meningitis	5	2	3	4	2	5	7
Pneumonia.....	25	27	28	24	42	10	52
Bronchitis	9	3	7	5	5	7	12
Consumption.....	38	28	39	27	61	5	66
Cancer	13	3	4	12	16		16
Congestion of Brain.....	2	1	3		1	2	3
Bright's Disease (Nephritis)	12	8	14	6	20		20
Diarrhœa (Enteritis)	7	8	9	6	10	5	15
Cholera Infantum	1			1		1	1
Dysentery.....	1	2	2	1	3		3
Debility, General	2	1		3	3		3
“ Senile	15	11	12	14	25	1	26
“ Infantile	1	3	2	2		4	4
All other causes	156	82	120	118	158	80	238
TOTAL	316	198	264	250	384	130	514

Still-born Children—White, 19; colored, 21; total, 40.

Population of City—White, 184,500; colored, 69,500; total, 254,000.

Death Rate per 1000 per annum for month—White, 20.55; colored, 34.18; total, 24.28.

F. W. PARHAM, M. D.,

Chief Sanitary Inspector

METEOROLOGICAL SUMMARY JANUARY.

STATION—NEW ORLEANS.

TEMPERATURE.				SUMMARY.								
Date.	Mean.	Max.	Min.	Precipn. in inches and hundredths.								
1	54	44	49	0	Mean barometer, 30.13.							
2	65	41	53	0	Highest barometer, 30.49, 16th.							
3	58	48	53	0	Lowest barometer, 29.75, 4th.							
4	69	46	58	0	Mean temperature, 50.							
5	64	49	56	0	Highest temp., 72, 31st; lowest, 29, 20th.							
6	48	41	44	0	Greatest daily range of temperature, 31, 9th.							
7	65	38	52	0	Least daily range of temperature, 5, 8th.							
8	43	40	42	0	MEAN TEMPERATURE FOR THIS MONTH IN—							
9	64	33	48	0	1871	54.0	1877	54.0	1883	57.6	1889	53.0
10	55	42	48	0	1872	48.0	1878	51.0	1884	47.0	1890	65.0
11	68	40	54	0	1873	49.0	1879	52.0	1885	52.0	1891	53.0
12	55	44	50	0	1874	50.0	1880	63.0	1886	40.0	1892	49.0
13	53	37	45	0	1875	54.0	1881	50.0	1887	51.0	1893	50.0
14	65	38	52	0	1876	60.0	1882	62.0	1888	50.0		
15	44	37	40	0	Total deficiency in temp'ture during month, 108.							
16	42	30	36	0	Total deficiency in temp'ture since Jan. 1, 188.							
17	45	37	41	0	Prevailing direction of wind, W.							
18	64	38	51	0	Total movement of wind, — miles.							
19	44	36	40	0	* Maximum velocity of wind, direction and date,							
20	45	29	37	0	32 miles, from N. W., 12th.							
21	51	36	44	0	Total precipitation, 2.50 inches.							
22	58	44	50	0	Number of days on which .01 inch or more of							
23	60	40	50	0	precipitation fell, 7.							
24	64	43	54	0	TOTAL PRECIPITATION (IN INCHES AND HUNDREDTHS)							
25	67	44	56	0	FOR THIS MONTH IN—							
26	66	49	58	0	1871	6.75	1877	5.30	1883	10.63	1889	6.51
27	62	53	58	0	1872	5.10	1878	5.30	1884	4.35	1890	0.66
28	68	52	60	0	1873	5.00	1879	2.34	1885	9.70	1891	3.75
29	67	52	60	0	1874	1.68	1880	1.02	1886	7.51	1892	5.87
30	67	52	60	0	1875	8.44	1881	11.15	1887	4.26	1893	2.50
31	72	53	62	0	1876	4.43	1882	4.54	1888	3.29		
					Total defic'y in precipitation during month, 2.90.							
					Total defic'y in precip'n since Jan. 1, 2.90.							
					Number of cloudless days, 19; partly cloudy							
					days, 6; cloudy days, 6.							
					Dates of frost, —.							
					Mean maximum temperature, —.							
					Mean minimum temperature, —.							

NOTE.—Barometer reduced to sea level. The T indicates trace of precipitation.

* To be taken from any five-minute record.

R. E. KERKAM, *Local Forecast Official.*

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

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No. 11.

Original Articles.

[No paper published or to be published in any other medical journal will be accepted for this department. All paper must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a written order for the same accompany the paper.]

MEMORIAL ADDRESS, DELIVERED ON COMMENCEMENT DAY,
APRIL 5, 1893, ON THE PROFESSIONAL SERVICES OF
TOBIAS GIBSON RICHARDSON, M. D., EMERITUS PRO-
FESSOR OF SURGERY; BORN JANUARY 3, 1827, DIED
MAY 26, 1892.

By PROF. STANFORD E. CHAILLE, M. D.,

DEAN OF THE MEDICAL DEPARTMENT, TULANE UNIVERSITY, LOUISIANA.

Mr. President, Ladies and Gentlemen:

Commencement Day is a day for rejoicing, not only by graduates who receive long coveted diplomas, but also by wearied teachers and students who have earned welcome rest. And yet, even here grief treads closely on the heels of joy, and, in my memory of past commencements, I see the loved and unforgotten dead arise and live again. I look to the seats of the faculty, and though I still see friends, yet of those by whose side I first sat, not one is left; and I am sadly reminded that the maintenance of this college, which gave me professional birth and to which I have given the chief ambition and labor of my life, has depended on the fruitful toil, and that its onward course has been marched over the graves of my oldest and my dearest friends. As one by one they have fallen from the ranks, despondency has needed a spur to duty, and I have seemed to hear, though unheard for thirty years, the voices of

fearless soldier-comrades calling calmly, even amidst the dying and the dead by shot and shell, "Steady, men, steady, close ranks and forward march!"

But one brief year has passed and our Chair of Surgery, filled at the last commencement by a distinguished colleague, Dr. Samuel Logan, has now no occupant. Rarely accomplished as anatomist, surgeon and physician, he gave to our college able and faithful service for thirteen years (1872-1885) as Professor of Anatomy, and for four years (1889-1893) as Professor of Surgery. So great were his merits as a surgeon that his reputation at home was unequaled, and he was widely known throughout the United States. He added to the literature of his profession many able contributions. As a military surgeon and medical inspector he gave to his native South four years of devoted and valuable service; and in peace, as well as in war, proved himself a brave, unselfish, judicious and patriotic citizen. He was a tender-hearted yet resolute man, a most courteous and considerate gentleman, a sympathetic friend, a loving father and a devoted husband. A high sense of duty animated him in the discharge of every responsibility, and the members of the Medical Faculty lost in him a noble, wise and learned colleague.

The Dean was warned by Prof. Logan weeks before his death, that at the close of the present session he would be compelled to resign. He knew that he was in the remorseless grasp of a fatal disease, which forced him to face on the one hand the probability of sudden death, on the other failing powers, ceaseless anxiety and much suffering. While bearing with fortitude this pitiable burthen, there ensued the most intense and hopeless sorrow of his life, due to the death (January 8, 1893) of his beloved wife. For more than twenty-one years this adorable woman had been his exceptionally efficient helpmate, his tenderly cherished friend, and she had given and received the supreme happiness of that perfect wedded love which, often sought, is rarely found. Prompted, doubtless, by a sense of heightened responsibility to his motherless children, he would not yield to his woeful afflictions, and, notwithstanding the anxiety of his colleagues to relieve him of every duty, he persisted, with calmness on his brave face but anguish in his lov-

ing heart, in resuming his duties on the fourth day after his wife's death. He lectured ably in the morning, and when, after hours of labor, his work was done, sudden unconsciousness and death, January 12, 1893, relieved him forever from the harrowing anxiety and inconsolable grief which would have made his life hopelessly wretched.

Lamentable as was his death to the many who loved him, specially grievous as it was to his family, yet he, if mindful only of self, would have welcomed with open arms the grim visitor who awaits us all. What death could be more enviable than one that permits an honorable life to be active and useful to the very last hours? What death more enviable than one that promptly closes an existence doomed to irremediable suffering, incessant anxiety and inconsolable grief?

Dear as was Prof. Logan's life, sad as was his death, this day is made still more grievous by the absence, for the first time in thirty-five years, of my oldest colleague and friend, Prof. T. G. Richardson, M. D. As officers of this college, we attended in 1859 our first commencement together, and, until to-day, I, when heart or brain may have faltered, have gained courage from the knowledge that his greater strength was by my side, eager to uphold me. For twenty years he, as Dean, stood where I now stand, and his commanding stature, noble face, grave and courteous manners gave unusual dignity to our commencements. His death (May 26, 1892) has left me the sole official link our college now has between the momentous historical periods which are separated by a disastrous civil war, and by the closing for three years of our college doors.

Prof. Richardson gave to our Medical Department such prolonged, able, and exceptionally generous services, that the faculty has specially dedicated this day to his memory, devoting two addresses to his life and services. In order that full justice might be done the subject, the usual annual address will be delivered by the Rev. B. M. Palmer, an orator who has no superior in our midst, a friend who was unsurpassed in the love and esteem of Dr. Richardson, and a man who stands first in the hearts of the people of New Orleans.

And in addition to the annual address, the faculty has especially requested that a memorial address upon Dr. Rich-

ardson's professional services should be delivered by me; for the reason that I was bound to him by thirty-four years of unbroken friendship and was intimately associated with him not only in success, happiness and peace, but also in disasters, woes and war. We were closely united by a common ambition for and devotion to our college; and by so many mutual services that, since 1858, very few advancements in the professional life of either have been accomplished without the other's aid. Hence, I hope I may be pardoned if, while speaking of him, I fail to avoid the difficulty of speaking unduly of myself.

So ardent was Dr. Richardson's love of truth that flattery or even exaggerations of speech were offensive to him, and I must strive to avoid extravagant eulogies, which, though unheeded by the dead, would have pained my living friend. In deference both to him and to the proper demands of history, I shall strive to be truthful, just, and instructive to the living; to render the record of his services a stimulus and a guide especially to those to whom he devoted the chief labors of his life, to medical students and the medical profession.

Dr. Richardson was born in Lexington, Ky., January 3, 1827, removed to Louisville in 1837, and, in 1845, when only eighteen years of age, became a medical student in the Medical Department of the University of Louisville. Exceptionally fortunate in his parentage and the influences of his home life, he was extraordinarily fortunate in the chief influence brought to bear on his professional life. For, immediately on becoming a medical student, he became a private pupil of Dr. S. D. Gross, the Professor of Surgery in the Louisville Medical College. Prof. Gross, then forty years of age and very distinguished, became, before his death (May 6, 1884) when seventy-nine years of age, the most beloved, influential and illustrious member the American medical profession has ever had.

One of the world's great men has said that, of two thoughts that always overwhelmed his mind, one was the thought of "man's responsibility to man." And it would be difficult to overestimate the influence of a man such as was Prof. Gross over a man such as was his private pupil—an influence begun when the latter was only eighteen years old, in-

creased by intimate personal intercourse almost daily for twelve years, and continued through forty years of devoted mutual friendship. Dr. Richardson's own words are: "I was aided and encouraged in my studies by Prof. Gross, who infused into me his own enthusiastic love of the science of medicine and surgery;" and "my early professional life was immediately fashioned by his fatherly hand; his example has ever been to me a pillar of cloud by day and a pillar of fire by night, and his personal confidence is treasured in my heart as a jewel of priceless worth." On the other hand, so great were the merits of Dr. Richardson that Prof. Gross recorded in his entertaining autobiography that "there is no man in the profession for whom I cherish a warmer regard."

On Commencement Day thirteen years ago there stood side by side where I now stand the venerable master and his favorite pupil—one the prince of American surgeons, the other our own distinguished Professor of Surgery and Dean—and each addressed our graduates of 1880. Both were men of lofty and graceful stature, and on their every feature were indelibly stamped the insignia of a nobility which imperial nature alone can bestow. Since Southern physicians and the South owe Prof. Gross a debt of gratitude; since he honored me for many years with his friendship, and since I entertained for him grateful affection and profound admiration, I can not refrain from adding something more of this remarkable man, who was not only America's most famous surgeon and medical author, but also one of nature's most genial, lovable and charming men; not only a most tender-hearted and broad-minded patriot, but also, though a native and resident of Pennsylvania, yet an ardent lover and defender of the South when in desperate need of such a friend. No unofficial citizen did more to allay the bitter animosities of war and to promote justice and loving consideration from the victorious North to the vanquished South. President of the American Medical Association in 1868, it was due chiefly to Dr. Gross that within the next ten years there were chosen to succeed him four Confederate surgeons and one Confederate sympathizer, who thus received the highest compliment in the gift of the American medical profession. In truth, it was chiefly due

to Dr. Gross that peace and good will were established between Northern and Southern physicians more promptly and more cordially than between, as I believe, any other classes whatever of Northern and Southern men.

Guided and aided by this grand man as his preceptor, Dr. Richardson, while a medical student, was devoted to his studies, and especially to anatomy, the most important of the fundamental branches, on which depends surgical and medical skill. He prosecuted his collegiate studies for the then unusual period of three years before his graduation, and during the last year was a resident student of the Marine Hospital. How ably he acquitted himself at his graduation in 1848 is proved by his immediate appointment to the Demonstratorship of Anatomy, an office that has led more frequently than any other to higher position; so frequently that it may be said of whoever obtains it that his foot is in the stirrup and whether he mounts and rides into a professor's chair depends solely on himself.

Dr. Richardson held this office until 1856, when he resigned it. During his eight years' tenure he was not content with such knowledge of anatomy as satisfies the ordinary demonstrator, but devoted much arduous labor to mastering the highest manual technique as well as the literature of the subject. Some of the results of the former labor still adorn our museum, for it contains many anatomical preparations, valued at \$2500, made by the industrious and skilful hand of Dr. Richardson while a Demonstrator of Anatomy; and these preparations, donated by him to our Medical College, constitute one of his exceptional claims to the gratitude of his colleagues.

In addition to this labor, he devoted himself so assiduously to the literature of anatomy that in 1853, only five years after his graduation and when only twenty-six years old, he had published the large text-book for students known as "Richardson's Elements of Human Anatomy." This admirable practical guide possessed three exceptional merits. It substituted English for Latin terms, wherever judicious and practicable; it combined descriptive and practical anatomy in the same volume; and it secured for dissection the greatest possible

economy of material. Many hundreds of students owed to this book their chief knowledge of anatomy, and so excellently was the work done that a second edition was published in 1867.

In addition to these unusually severe labors, during the eight years of his demonstratorship, he contributed meritorious articles on surgical diseases to the *Western Journal of Medicine*, and in 1855 founded and edited, in connection with Prof. Gross, the *Louisville Review*. All of this literary work was accomplished within eight years after graduation, before he was twenty-nine years old, and by one who had not had collegiate or classical instruction and possessed, when he became at eighteen years of age a medical student, no more than a good, sound English education. So well was this work done that in 1856, when he resigned his demonstratorship, he had made among the first men in his profession a reputation unsurpassed by any man of his age. He owed this enviable reputation to the zealous and skilful use of two insignificant little instruments, the scalpel and the pen, that have made more medical reputations than any agents whatever. He persistently and rightly maintained that no physician could deserve or obtain a place in the front rank of his profession without free use of the pen for publication, and that this was an imperative duty which every physician, who aspired to more than a merely local and provincial reputation, owed to himself, to his college and to his profession.

During the forty years of my professional experience, I have heard of no physician who had at twenty-nine years of age such conclusive proofs of great reputation as had Dr. Richardson. For, in 1856, when he resigned the demonstratorship, he was at once offered three professorships; first, the chair of surgery in the Kentucky School of Medicine at his home; second, the chair of anatomy in the New York Medical College; and third, the chair of anatomy in the Medical Department of the Pennsylvania College at Philadelphia.

Dr. Richardson decided to leave home and family in Louisville, and, accepting the professorship in Philadelphia, removed there in 1856. This removal was no doubt due to the facts that Philadelphia was then the greatest centre of medical education in the United States, and that his most valued friend,

Prof. Gross, accepting the chair of surgery in the famous and popular Jefferson Medical College, had removed also in 1856 to Philadelphia. Profs. Gross and Richardson there established the very able "North American Medico-Chirurgical Review," and the latter continued to be its junior editor until its suspension in 1862 by the war.

After two years' residence in Philadelphia, Dr. Richardson resigned his professorship of anatomy, in order to accept the same chair in our college, then as now one of the most prominent and popular of the medical colleges of the United States. He was chosen April 19, 1858, to fill the vacancy caused by the resignation of Dr. J. C. Nott of Alabama, one of the ablest anatomists and surgeons, one of the most learned writers, and one of the noblest men whom the South has ever given to the medical profession. Arriving in New Orleans in the fall of 1858, Prof. Nott's high recommendation of his young successor was more than justified by Prof. Richardson, who very promptly proved himself to be the most efficient and popular instructor of anatomy our college had ever had. Notwithstanding this fact, and also that he subsequently conferred greater services on our college than any other man whatever, there were not lacking those who denounced the appointment of Prof. Richardson as an importation from abroad, and who ridiculed the claim of the faculty to his superior fitness.

One month before his appointment as Professor of Anatomy, I had been chosen (March 20, 1858) a Demonstrator of Anatomy, and in the fall of 1858 we first met, I as his subordinate, and we began at the same time our official duties. We quickly became friends, and I was invited to unite with him in forming the first corps of teachers of a so-called quiz-class ever organized in New Orleans. We were remarkably successful, but after one session I was left chief of the corps, because of his resignation. This was due to information given him that some regarded the acceptance by a professor of fees from a private class as bribes for his vote for a degree, and he would not consent to expose himself to so vile a suspicion.

For four sessions he served our college, until Farragut's capture of New Orleans in May, 1862, closed the college doors, and every year of this service increased his reputation and in-

fluence. How disastrously even the first year of the war affected our college is sufficiently manifest from the fact that while the class of 1861 numbered four hundred and four, the class of 1862 numbered only ninety-four. Our students and graduates, discarding books, grasped swords, and the South had no sons who proved braver or better soldiers.

Family affairs delayed Dr. Richardson's entrance into active military service, and when, in 1862, he arrived at the headquarters of our army, he found me in the enviable position of Medical Inspector of the Army of Tennessee, and a staff officer of Braxton Bragg, as brave, patriotic and noble commanding general as any country ever had. The best vacancy then to be found for my friend was that of an Assistant Medical Director, an office with only clerical duties, in which his great knowledge and skill were lost to his country. In this uncongenial office he worked bravely and uncomplainingly many weary months, and until July 24, 1863. On this date Gen. Bragg, ever as considerate to me as a father, finally consented to my urgent request to be relieved of service in the field and to be assigned charge of a military hospital. My beloved General requested me to recommend to him my successor, and I strenuously urged the promotion of Surgeon Richardson. He continued to be a member of Gen. Bragg's staff until the very last days of the war, accompanying him with President Davis and his staff to Washington, Ga., where, in May, 1865, the Confederate officials were finally dispersed.

While with Gen. Bragg, Surgeon Richardson first served as Medical Inspector of the Army of Tennessee, and in 1865 as Medical Director of the Department of North Carolina. In the meantime he had been on duty in Richmond, and was there so appreciated that, by special request of the surgeons of one of the largest military hospitals, he performed a large part of the capital operations after the bloody battles of the Rapidan, Spottsylvania Courthouse and Cold Harbor.

During Surgeon Richardson's long service in the field he was on duty at the great battles of Murfreesboro, Chickamauga and Missionary Ridge, and at the lesser but last battles of the war at Averysboro and Bentonville, N. C. In the three last battles the Confederates were defeated, and I had

the evidence of Gen. Bragg himself that in defeat, far more trying to the soldier than victory, the coolness and courage of Surgeon Richardson were unsurpassable. As a medical officer he served the South with honor and distinction, and, actuated by patriotism and a high sense of responsibility, he discharged his duties, whether congenial or uncongenial, with the signal fidelity, good judgment and surgical skill which characterized him.

Returning to New Orleans in September, 1865, he resumed his chair of anatomy and his private practice. I had returned before him and had urged members of the faculty to appoint him, as soon as he arrived, Dean of the Faculty, and to the great advantage of our college this was effected on October 6, 1865. Soon greater responsibility and power were given to the office than any Dean had ever exercised, and all this was done notwithstanding the fact that Prof. Richardson was then the youngest member of the faculty.

During the twenty years following 1865, Dr. Richardson was very actively occupied in the numerous duties imposed on him as Dean and Professor, as a visiting surgeon of the Charity Hospital and a practitioner of surgery and medicine, as a member of numerous societies and a frequent contributor to medical literature; and finally as a patriotic citizen deeply interested in the welfare of this city, especially in regard to its sanitary improvement. Discharging all of these duties ably and faithfully his reputation and influence were year by year augmented.

In manner he was always calm, dignified, unostentatious and wholly free from all efforts to gain meretricious applause; and not only as lecturer and teacher, but also as a speaker and writer he was earnest, clear and forcible in statement, and as impressive of fundamental principles as he was replete with facts. His judicious and broadly cultured mind viewed every subject from every side, and he presented his own with such force and fairness that his conclusions commanded the respect of all, even of doubters and opponents.

As a practitioner of surgery and medicine he secured to unusual extent the confidence, esteem and gratitude of his patients, who were, in large number, members of our most influential families. He possessed in eminent degree the

special qualifications requisite to the surgeon, a thorough knowledge of anatomy, great manual dexterity, and the broad knowledge of medical science which characterizes the wise physician, and without which the surgeon can never be more than a mechanic. His courage and strength of will, his ample knowledge and coolness of judgment, were so great that neither cries of anguish nor jets of blood nor cruel mutilations disturbed the firmness and delicacy of his untrembling hand.

So great were his merits as a surgeon that when our most beloved and most famous professor of surgery, Dr. Warren Stone, was forced by sickness to resign, Prof. Richardson was at once appointed, May 18, 1872, to fill the vacancy, and he occupied the chair of surgery during the following seventeen years.

In the meantime there occurred in 1877 two memorable events, one notable in the life of Dr. Richardson, the other most momentous in the history of our State; for, Louisianians had at last succeeded in rescuing their State from the baneful rule of aliens and negroes and in regaining their precious heritage of liberty. Now, two of Prof. Richardson's colleagues (Profs. Bemiss and Chaillé) knew that Louisiana had never had a president of the American Medical Association; that Dr. Richardson had conferred upon it very important services in 1869, when its annual session was held in New Orleans; and that he was the most distinguished and best representative of the medical profession of Louisiana. And these two colleagues decided that the medical profession of our whole country, a profession distinguished for its freedom from narrow political prejudices and from sectional hatred, ought to manifest sympathy for Louisiana's restoration to self-government by honoring our State with the presidency of the American Medical Association. These views, urged upon the most influential members of the Association, found enthusiastic sympathizers in the veteran Prof. Gross and many other friends of Dr. Richardson; and the former, zealously leading the latter, succeeded, on the very first ballot, in having Prof. Richardson elected president. This gratifying result was accomplished in spite of three notable obstacles: first, the annual session of 1877 was held in the distant northern city of Chicago; second, there were there present very few members from Louisiana, and an immense

majority of northern over southern members; and third, three distinguished northern physicians were Dr. Richardson's unsuccessful competitors for the presidency.

Thus chosen, Prof. Richardson presided over the annual session held in 1878 in Buffalo, N. Y., and his very able presidential address enforced many wise lessons, which still deserve to be impressed on both physicians and the public.

Always an earnest advocate for the efficient preliminary education of medical students and for not less than three annual courses in a medical college, Prof. Richardson advocated the graded system of medical education in place of the present mixed system, as the only philosophical and desirable method. However, he insisted that the only hope of any reforms depended on elevating the sentiment and tone of the masses of the medical profession and of enlightening, at the same time, the public.

He forcibly urged that State Medicine—embracing as it does every subject for the comprehension of which medical knowledge and for the execution of which State authority are indispensable—was undoubtedly the most important subject ever considered by the American Medical Association. But here again he insisted that “the hope of true progress in State Medicine lies in the education of the people.”

He pleaded that our Federal government should make annual appropriations to promote original researches for the prevention of the diseases of man, as is done to prevent the diseases of useful plants and of domestic animals.

He urged that State Medical Societies should “have State Boards of Health created where these do not exist, and that these societies should by all means secure the right of nomination for appointment upon such board; otherwise, positions, which demand men of peculiar qualifications and sterling integrity, will be conferred, as is too often the case, upon mere office-hunters who have no interest whatever in the matter beyond its pecuniary return.”

He contended that Congress should “at once create a Sanitary Department of the general government, with an officer at its head, who shall be the peer of the Secretaries of State, War and Finance; and be assisted in the performance

of his duties by a National Council of Health, composed of members from every State in the Union."

He also contended that the United States should establish a national quarantine along the entire coast of the United States. Referring to the statute of April 29, 1878, which provided for the establishment of quarantine stations where none exist, he urged that if the Federal government has the right to establish such stations within the bounds of any State, the right to do the same in all is unquestionable. He contended that the inefficiency and "the abuses of the present system of quarantine by separate States, arising mainly from the fact that its officers are, for the most part, appointed from political considerations, and with no reference to their fitness or unfitness for the positions, are so flagrant as to demand the attention and if possible the redress of the central government." Finally, on this subject, he claimed that "the inauguration of a uniform sanitary police, with reference to maritime commerce, would be hailed with delight by all the citizens of the coast States, save and alone by individuals who are politically and pecuniarily interested in perpetuating the present unequal and unjust system. It would not only protect the people from the impositions already referred to, but would relieve them from an onerous tax from which there seems to be otherwise no escape."

Specially emphasizing the supreme importance of hygiene he wisely insisted that "properly directed public education is essential to public health, and every scheme for the promotion of the latter which is not founded on the former must inevitably fail." The people must be taught hygiene in the first place by physicians, but "hand in hand with the physician should be seen the minister of the Christian religion, who, like the former, is brought by his calling into closest relation with all grades of society, and thus is equally fitted to become a messenger of health, not only to those who belong to his pastoral charge, but to all who come within the circle of his personal influence." And he strenuously advised that a course of study in sanitary science should be made obligatory in every theological seminary.

When a professor of hygiene, as I am, insists upon the supreme importance of his subject to the public welfare and

therefore to medical students, the force of the lesson is apt to be diminished by the suspicion that the teacher's claim is due to the vanity which induces most men to overrate the importance of their own special knowledge. Therefore I have summoned, even from the grave, the voice of our distinguished professor, not of hygiene but of surgery, to enforce a lesson which must at last be heeded, if mankind is ever to gain the happiness life can bestow. And with the lesson taught by our own honored dead, I will associate, as would well please both, the words of the illustrious sage and the greatest of American surgeons, Prof. Gross, who in 1879, in one of the last of his addresses to a medical audience, thus spoke: "Young men of America, listen to the voice of one who has grown old in his profession, and who will probably never address you again. * * * The great question of the day is not this or that operation * * * but preventive medicine. This is *the* question which you, as representatives of the rising generation of physicians should urge, in season and out of season, upon the attention of your fellow-citizens—the question which, above and beyond all others, should engage your most serious thoughts and elicit your most earnest co-operation."

Turning to our graduates and students, I entreat and warn them to heed the lesson taught by two of the most distinguished surgeons whom our country has had—great surgeons who were also two of our best and wisest men.

When Prof. Richardson, in 1865, became the Dean of our Medical Department, thousands of dollars of debt were owed by the faculty. Its members, impoverished by the war, were dependent chiefly on bankrupt patients, who, in unusual number, were most unprofitable patients. Many of our students had been gallant soldiers, and were impecunious, and all of them came from States that were in the hands of the most ignorant, insolent, venal and corrupt rulers who ever oppressed and robbed a brave and vanquished people. By these political miscreants the very life of our college was repeatedly threatened and endangered, and owed its escape chiefly to the fact that, in their vile ranks, there were lacking enough physicians of ability and influence to render the transfer of our college a source of profit to them.

Under these adverse conditions, the number of our classes dwindled year by year to such extent that, while in 1861 we had had four hundred and four students, in 1876 we had only one hundred and five, and the annual pay of a professor was reduced to \$900.

Every member of the Faculty was despondent, and our Dean, anxious and discouraged, became doubtful whether he was the best man for the office, and consulted me about resigning in my favor. I insisted that I and all other members were convinced that he was the best man for the office and that I would strenuously oppose his resignation. After our escape from imminent danger our Dean several times expressed to me his wish to resign and that the office should be given to me. And in 1885, after the unprecedented term of twenty years as Dean, he finally resolved to and did resign. But not until every debt had been paid; not until he had guided our college to security through the most trying time of anxiety, poverty and peril in its history; not until there had been plucked out of the nettle, danger, the flower, safety. June 1, 1885, he transferred to my supervision the college, so dearly loved by both, restored to vigorous health and prepared for a future of so much greater usefulness and fruitfulness that during the following six years the number of our class increased from two hundred and twenty-three in 1885 to four hundred and seven in 1891.

Having in 1885 resigned the deanship, Prof. Richardson, March 28, 1886, resigned also the chair of surgery, but a unanimous faculty protested so strenuously that he consented to withdraw his resignation. However, his health began to fail during the session of 1886-87, and year by year his malady increased until, in the very midst of the session of 1888-9, our faithful veteran was forced to request the faculty to release him from the discharge of his duties, and on February 15, 1889, these duties were temporarily assigned to Prof. Logan, who ably discharged them. The chair of surgery was finally resigned by Prof. Richardson, May 18, 1889, thus completing a tenure of thirty-one years of official service to our college, viz: fourteen years, 1858-1872, as Professor of Anatomy; seventeen years, 1872-1889, as Professor of Surgery, and twenty of these years, 1865-1885, as Dean.

As to the value of these services the members of a unanimous faculty testified: that Prof. Richardson was their "most valued member and wisest counselor;" "that his inflexible devotion to truth, honor and duty furnished for their guidance the highest and noblest standard of true manhood; that his ability and experience as a teacher placed him in the foremost rank of medical instructors; that his wisdom as Dean successfully guided the destiny of the Medical Department through many years of its severest trial; and that to him, more than to any other, was due its present prosperity."

Transmitting this evidence of Prof. Richardson the Dean wrote:

"The enclosed resolutions bear witness to the affectionate regard and the supreme esteem entertained for you by your colleagues. Throughout your thirty-one years of service, I have been officially associated with you, and during all of these many years our voices and our votes have always been in unison. Oftener you have led and I have followed, but, when otherwise, your support has never failed me.

"No one can possibly replace you in the unlimited confidence, born of time and of trial, that I repose in you and your resignation is therefore felt by me as a personal bereavement. To this sorrow is added the unwelcome inheritance from you of the very sad honor of being now left the oldest professor and the oldest man in the faculty. Affectionately and faithfully your friend,

"STANFORD E. CHAILLÉ, M. D., *Dean*."

In reply, Prof. Richardson, then prostrated by very painful disease, wrote his last lines in termination of his long and honored period of active service. These last lines, written in great suffering and in pencil, are precious to me:

"NEW ORLEANS, May 29, 1889.

"MY DEAR DOCTOR—I am not strong enough to-day to fix my thoughts on anything, or even to hold a pen, and I can not, therefore, reply in fit terms to your very kind letter, accompanying the complimentary resolutions adopted by the Faculty on the occasion of accepting my resignation. All that I can now say is that I most sincerely reciprocate all that you write in regard to our personal relations during the past

thirty-one years. You can have no idea how sad I feel now that my resignation from the college is an accomplished fact; and as you and I have been shoulder to shoulder throughout all that period, the separation from you affects me most of all. Accept this assurance of my friendship, and with the sincere hope that there may never be any diminution of our mutual esteem, I am, as ever, your devoted friend,

“T. G. RICHARDSON.

“P. S.—My Dear Friend—I can not reply to the resolutions of the Faculty. I do not deserve such encomiums, and the mere reading of them has completely upset me. Some time in the future, if I should recover my strength, I may undertake an answer, but in the meantime I beg that you will signify the spirit with which I have received them.”

Although this letter closes the record of his active service, yet, so ardent was his devotion to our college that his interest and services in its behalf never ceased until the unconsciousness of death was upon him.

As an administrator of the Tulane University, from its origin in 1884, he was zealous in behalf of the Medical Department, and secured for it important benefits. He never failed to encourage and aid his successor in everything calculated to promote the welfare of our college; and the very last official letter, written two years after his retirement from active service to the Dean of the Medical Department, proved conclusively his unalterable devotion to his beloved college and his judicious and generous appreciation of its needs. In this memorable letter of March 3, 1891, Dr. Richardson wrote: “I am authorized by Mrs. Richardson to place at your disposal \$50,000 for the erection of a building for laboratories of chemistry, physiology, pathological anatomy, microscopy, etc., and for suitable anatomical rooms, provided that for this purpose the Faculty can obtain from the administrators of the Tulane University of Louisiana either of the two lots contiguous to the building of the Medical Department; work upon the new building to be begun within a year of this date.”

The Medical Faculty replied, March 6, 1891, as follows:

“The generous and philanthropic offer of Mrs. Richardson to contribute \$50,000 for the building of laboratories, on which now chiefly depends the future progress and prosperity of the Medical Department, is most gratefully accepted. In addition to the respect, affection and admiration that her gentle and noble character arouses in all who know her, Mrs. Richardson has by this act deserved the profound and lasting gratitude of all who have at heart the welfare of New Orleans and the relief of human suffering, and the gratitude especially of those on whom is imposed the duty of promoting the prosperity of the Medical Department.

“Prof. T. G. Richardson, M. D., for very many years our honored colleague and Dean, is earnestly solicited to become the chief counselor and agent of the faculty in everything that may concern the expenditure of this gift, to the end that every dollar may be disbursed prudently and wisely for the greatest benefit of the Medical Department and of the public and to the perfect satisfaction of the donor.”

Difficulties arose as to securing either of the lots contiguous to the old building; the faculty did not desire the responsibility of taking charge of the donation; and for other reasons a letter was addressed, May 9, 1891, to United States Senator R. L. Gibson, President of the Board of Administrators, signed “Ida A. Richardson, approved T. G. Richardson,” which was briefly as follows: “If the administrators will furnish a suitable site for a Medical College, I will contribute one hundred thousand dollars toward the erection of the building, to be paid from time to time as the work progresses.” The administrators accepted this donation and provided, at an expense of \$35,000, an admirable site.

Such is a brief history of the inception of our new college building, due to the conjoint liberality of T. G. Richardson and his wife, Ida A. Slocomb. Their timely gift will prove an incalculable advantage to our college, to many generations of its students, and to the cause of medical education, on which depend those inestimable blessings to the people, the prevention and cure of disease. Radiating from our city, these blessings will be disseminated far and wide over our land, and will be

shared by countless sufferers, by the rich and the blest, and yet even more by the destitute and the wretched. Our new building will stand an enduring monument not only to the generosity and worth of the donors, but also to their exceptionally enlightened appreciation of the value of medical knowledge to the welfare of the people; and this building will serve as a memorial to bind in lasting union two names which were united for nearly twenty-five years (November 12, 1868, to May 26, 1892) in faithful and devoted love.

Dr. Richardson's influence in behalf of our college did not end with his life. Through him exceptionally appreciating the needs of medical education and in loving remembrance of him, Mrs. Ida A. Richardson has added very largely to the original gift in order that everything lacking and indispensable to insure the usefulness of the new building may be supplied.

A brief summary of Dr. Richardson's life, as a graduate of medicine, is requisite to an impartial estimate of the forty-four years of service given by him to his profession. Impelled by unselfish patriotism he gave for three years (1862-65) his great learning and skill, as a surgeon, to the soldiers of the South, to the greater credit of its medical service. As an educator he devoted thirty-eight years of active service to the instruction in anatomy and surgery of many thousands of medical students, and to all of these he gave better knowledge, and inspired them with greater regard for and devotion to the profession. Appointed to office by five medical colleges, he, for thirty-eight years, served three of them, adding efficiency and repute to them all. He gave to our college twenty-eight years of active service as a Professor and twenty years as Dean; he paid all its debts, he enriched its museum with the products of his own skilful labor, he guided our college safely through the darkest period in its history, and he greatly increased its usefulness and reputation. While Administrator of the University he secured for the Medical Department, and therefore for medical education and profession, very valuable benefits. While President of the American Medical Association he ably maintained the reputation and dignity of the medical profession. He was the most influential founder of our State and of our Parish Medical Societies, and, as a member of many other societies,

he gave to them all greater influence and reputation. For seven years he edited medical journals and for many more years contributed to medical literature, always to the benefit of his profession. For twenty-eight years he was one of the visiting surgeons of our great Charity Hospital and no one did more than he to heal the many ills and assuage the many sorrows that always fill it. During forty years he practised surgery and medicine and inspired thousands of laymen with greater confidence in and respect for the medical profession.

No man among us was more esteemed by his professional brethren. He never boasted, as the charlatan does, of his successes; and was wholly exempt from all the compromising devices by which patronage is too often obtained. He sought the approval of his own conscience rather than the favor and applause of others. He strictly adhered to the ethics and etiquette of his profession, and was zealous in every good work which had for its object medical improvement and the advancement of medical science. Courteous and unassuming in manner, lofty in aim, exceptionally pure in his life, firm in purpose, magnanimous in conduct, learned, skilful and wise, he necessarily added lustre to his profession and was, both within and without it, a potent influence for all that is best.

Well versed in sanitary science, he added to the fame of his profession, by using his influence, as a public-spirited citizen, to promote the practice of hygiene, to protect our city from invasion by foreign disease, and to improve in all other ways the public health.

He added honor to his profession by contributing liberally to every good cause, not only money, but also the great influence which high character and great ability gave him. Though racked by agonizing pain and fully conscious that death was near at hand, the anti-lottery cause, involved in doubtful conflict, had no friend, in like pitiable condition, so resolute and so valuable, and none less bitter to opponents.

Hand in hand with his beloved and honored wife, he crowned these numerous and invaluable services to his contemporaries within and without the medical profession by contributing with a liberality, unexampled in the South, to the prog-

ress of medical education, for the benefit of generations to live after him.

Surely if any man, then this man “wrought his life in noble deeds;” the medical profession profited by his labors and mankind is better for his living. He taught well by precept, yet better still by example, and he has strengthened many to serve profession and humanity less selfishly. During his professional life there have lived many thousands of physicians, and of all these thousands I know not one, throughout the United States, who better served, and not one, throughout the extended length and breadth of the South, who as well served the medical profession as did Dr. Richardson.

He possessed superior characteristics, which, during the intimacy of long friendship, specially attracted and impressed me. He had a profound and active mind, eager to the last for new knowledge, and earnest in search of truth, however unpalatable it might prove. Hence he was always a student and in step with the onward march of medical science. He regarded every subject broadly and from every side, and often surprised me by his thorough knowledge and appreciation of the arguments of those whose conclusions he opposed. The breadth of his mind and the extent of his knowledge, both of science and of human nature, rendered him tolerant of opinions opposed to his own and charitable to human frailties.

He possessed pre-eminently one of the distinguishing marks of great ability, not only the mastery of many details, but a profound comprehension of the elementary principles which bind details together, and on which these are founded.

He was distinguished not only for physical, but also for great moral courage. Actuated by a high sense of duty, he more than fulfilled whatever he promised, and was exceptionally punctual and efficient. He never subordinated official duty to personal convenience or private obligations, and used office and its influence not for self, but for the general welfare.

He abhorred hypocrisy, falsehood, prevarication, scandal and gossip with a vehemence proportionate, as is usual, to nobility of soul. Profanity, obscenity, vulgar wit, met with

no assumption of "I am holier than thou," but were ignored as if unheard.

Beneath a calm manner and habitual reserve in the expression of his emotions, there throbbed a loving and a loyal heart. In his friendships he manifested the unusual combination of saying little but doing much, so that his deeds in behalf of friends who needed his services always surpassed their expectation, and the longer he was known the greater was the trust reposed in him and the higher the value attached to his friendship.

Thoughts of him whose unwonted absence saddens this Commencement are mingled in my memory with strengthening words of the ancient Hebrews. For he was one of the rare men whom Solomon lauded when he said: "He that conquereth himself is greater than he that taketh a city;" and my friend could while living have happily responded to the demand of the prophet Micah: "What more doth the Lord require of thee but to do justly, to love mercy and to walk humbly with thy God?"

And when I recall the frequent tenor of my friend's thoughts I find them in notable harmony with Carlyle's brief sketch of man's place in the universe: "He is of the earth, but his thoughts are with the stars. Mean and petty his wants and his desires, yet they serve a soul exalted with grand and glorious aims—with immortal longings—with thoughts which sweep the heavens and wander through eternity. A pigmy, standing on the outward crust of this small planet, his far-reaching spirit stretches outward to the infinite, and there alone finds rest."

The friend for whom his colleagues this day mourn was a representative of the highest type of the world's manhood, a Christian gentleman; and, while living as well as when dying, he derived constant solace from his ardent faith in the most persuasive and the most consoling hope ever given to man—given by Him who promised: "He that believeth in me, though he were dead, yet shall he live; and whosoever liveth and believeth in me shall never die."

APPENDICES TO THE MEMORIAL ADDRESS OF STANFORD E.
CHAILLÉ, M. D., ON THE PROFESSIONAL SERVICES OF
DR. T. G. RICHARDSON.

Appendix A.

SUMMARY OF THE PROFESSIONAL SERVICES AND OF THE OFFICES HELD BY
TOBIAS GIBSON RICHARDSON, M.D.

Born in Lexington, Ky., January 3, 1827, and died at his residence at the corner of Prytania and Second streets, New Orleans, La., May 26, 1892.

Resided at Lexington, Ky., 1827-1837; Louisville, 1837-1856; Philadelphia, 1856-1858; New Orleans, 1858-1892.

Medical student Medical Department University of Louisville, 1845-1848.

Resident student of Louisville Marine Hospital, 1847-1848.

Graduated an M. D., Medical Department University of Louisville, 1848.

Demonstrator of Anatomy, Medical Department University of Louisville, 1848-1856.

Professor of Anatomy of the Pennsylvania Medical College at Philadelphia, 1856-1858.

Professor of Anatomy of Medical Department Tulane University, La., April 19, 1858, to May 18, 1872.

Surgeon of Army of Confederate States, 1862-1865.

Assistant Medical Director Army of Tennessee, 1862-1863.

Medical Inspector, staff of Gen. Bragg, July 1863-1864.

Medical Director, staff of Gen. Bragg, —, 1865 to May, 1865.

Dean of Medical Department Tulane University, La., October 6, 1865, to June 1, 1885.

Professor of Surgery, Medical Department Tulane University, La., May 18, 1872, to May 20, 1889.

Emeritus Professor of Surgery, Medical Department Tulane University, La., May 20, 1889, to May 26, 1892.

President American Medical Association, 1877-1878.

Appendix B.

Prof. T. G. Richardson, M. D., was a member of the following societies, viz.:

The American Medical Association, the American Public Health Association and the American Surgical Association.

The College of Physicians and the Academy of Natural Sciences, Philadelphia, Pa.

The Louisiana State Medical Society, the Orleans Parish Medical Society, the New Orleans Auxiliary Sanitary Association, and an honorary member of the Louisiana Pharmaceutical Association.

Appendix C.

Contributions to the literature of medicine, etc., by Dr. T. G. Richardson, are to be found as follows in—

The Western Journal of Medicine, Louisville, 1848-1855.

The Louisville Review, co-edited with Dr. Gross, 1855-1856.

North American Medico-Chirurgical Review, co-edited with Dr. Gross, 1856-1862.

Richardson's Elements of Human Anatomy in 1853 and a second edition 1867, Lippincott & Co., Phila., pp. 671, octavo.

Life of Dr. Jno. D. Godman, pp. 247-266 in Gross' American Medical Biography, 1861.

New Orleans Medical and Surgical Journal, 1859-1885. (See the Nos. of September, 1859; September, 1860; July, 1866; September, 1867; July, 1868; October, 1869; July, 1873; May, 1875; August and October, 1879; December, 1880; March, 1881; March, 1885.)

Transactions American Medical Association, p. 9, Vol. 20, of 1869, and President's Address, pp. 93-111, Vol. 29, of 1878.

Transactions American Surgical Association, p. 345, Vol. 5, of 1887.

Philadelphia Medical News and Library, Chronic Cystitis, 1878, etc.

Official Publications of Medical Department Tulane University of Louisiana, of Louisiana State Medical Society, and of New Orleans Auxiliary Sanitary Association.

Louisville Courier-Journal published in 1874 eight interesting letters of travel in Cuba and Mexico.

Appendix D.

EXTRACTS FROM THE MINUTES OF THE FACULTY OF THE MEDICAL DEPARTMENT, TULANE UNIVERSITY, LA.

EXTRACT FROM THE MINUTES, MARCH 31, 1885, VOL. III, P. 62.

“The Dean, Prof. T. G. Richardson, then stated that having served as the executive officer of the Faculty for twenty years he now seriously desired to be relieved of its duties and responsibilities. Every member of the Faculty having expressed kindly sentiments and regrets, it was moved by Prof. Elliott that the Dean’s resignation be accepted to take effect upon the 31st day of next May. Seconded by Prof. Jones and passed.

“Prof. Lewis then moved that Prof. Chaillé be now elected Dean of the Faculty to take effect upon June, 1, 1885. Prof. Chaillé having withdrawn, the motion was seconded by Prof. Elliott and passed unanimously.

“The Dean, Prof. Richardson, having retired from the meeting, Prof. Chaillé introduced some complimentary resolutions in regard to the former which were ordered to be hereafter entered upon the minutes.

“The Dean having been recalled, and no further business having been presented, the Faculty adjourned.”

EXTRACT FROM THE MINUTES, JUNE 1, 1885,
VOL. III, P. 71.

“At a meeting of the Faculty on March 31, 1885, the following resolutions, offered by Prof. Chaillé, were unanimously adopted:

“WHEREAS, Prof. T. G. Richardson, M.D., has served the Medical Department as its executive officer, or Dean, during the exceptionally long period of twenty years, a period which, though the most critical and embarrassing in the history of the Medical Department of the University of Louisiana, has been traversed without detriment to its high repute, and to its best interests, and has been crowned by its union with the Tulane University, thereby securing a new career of usefulness and honor; therefore, be it

“ *Resolved*, That this Faculty accept Prof. Richardson’s resignation of the deanship with profound regret, and hereby testify to their highest appreciation of the unswerving faithfulness, of the good judgment and of the distinguished ability with which he has during so many years discharged the grave, exacting and often vexatious duties of his post;

“ *Resolved*, That these resolutions be recorded on a separate page of the minutes, and on the page following the last minutes which may be recorded by Prof. Richardson, as Dean.”

EXTRACT FROM THE MINUTES, MARCH 29, 1886,
VOL. III, PP. 80-81.

“ The following preamble and resolutions presented by Prof. Elliott were unanimously adopted by the Faculty:

“ WHEREAS, Prof. T. G. Richardson, M. D., Professor of Surgery in the Medical Department Tulane University of Louisiana, has officially signified his wish to sever his connection with the Medical Department; be it

“ 1. *Resolved*, That we, the Faculty of the Medical Department have heard with feelings of profoundest regret and sadness the announcement by Prof. Richardson of his desire to resign his position as Professor of Surgery.

“ 2. *Resolved*, That we recognize in the present favorable and flourishing condition of the Medical Department the beneficent results of the wise counsels and firm leadership of Prof. Richardson, who, through the darkest period of the history of our college, has been the guiding spirit of its fortunes.

“ 3. *Resolved*, That the pure and lofty character of Dr. Richardson has been and is a tower of strength to the Medical Department; that his ability as a lecturer and his skill as a surgeon have interwoven his name with the reputation of this college throughout the length and breadth of our land.

“ 4. *Resolved*, That at no time in the past have his powers for counsel and instruction been more conspicuously apparent and valued than at the present moment, and we feel assured that the Chair of Surgery could have no abler occupant.

“ 5. *Resolved*, That, resting in these conclusions, we earnestly ask that Prof. Richardson will reconsider his motion for resignation.”

EXTRACT FROM THE MINUTES, MARCH 30, 1889,
VOL. III, P. 114.

“In consequence of continued indisposition, Prof. Richardson requested to be relieved of his duties, and on February 15, 1889, the Dean was authorized by all the members of the Faculty to engage Prof. Logan to fill the Chair of Surgery during the remaining six weeks of the session.”

EXTRACT FROM THE MINUTES, APRIL 1, 1889,
VOL. III, P. 120.

On the motion of Prof. Souchon, it was unanimously

“*Resolved*, That the Faculty extends to Dr. Samuel Logan, Emeritus Professor of Anatomy and Clinical Surgery, its very cordial thanks for his valuable and most acceptable services in replacing during the last six weeks of the session of 1888-89, Dr. Richardson, Professor of Surgery, temporarily disabled by sickness. The sacrifices made by Prof. Logan to respond to the grave emergency without detriment to the Medical Department are very highly appreciated.”

EXTRACT FROM THE MINUTES, MAY 20, 1889,
VOL. III, PP. 125-7.

The Dean then read the following letter:

“NEW ORLEANS, May 18, 1889.
“*To the Dean and Faculty of the Medical Department Tulane University of Louisiana:*

“GENTLEMEN—After thirty-one years’ service as a member of the Faculty I am compelled in consequence of my bad health to ask you to accept my resignation, tendered to you verbally two years ago. You may be sure that it is with inexpressible regret that I make this request, and you may be equally certain that I shall always feel the deepest interest in the success of the institution. If I can at any time be of service I trust that you will not hesitate to command me.

“With sincere regards, I am very truly your obedient servant,

“T. G. RICHARDSON, M. D.,
“*Professor of Surgery.*”

The three following resolutions were unanimously adopted:

“*Resolved*, That Prof. Richardson’s resignation be accepted.

“*Resolved*, That Dr. T. G. Richardson be chosen Emeritus Professor of Surgery.

“*Resolved*, That Profs. Chaillé, Lewis and Elliott act as a committee in behalf of the Faculty in respect to appropriate resolutions concerning the resignation of Prof. Richardson.”

The committee reported the following resolutions which were unanimously adopted:

“WHEREAS, Prof. T. G. Richardson, who has served the Medical Department for thirty-one years, fourteen as Professor of Anatomy and seventeen as Professor of Surgery, including twenty years as Dean, has urged the acceptance of his own resignation because of ill health, be it

“*Resolved*, That Prof. Richardson’s resignation is accepted with the utmost regret, this Faculty being thereby deprived of its most valued member and its wisest counselor.

“*Resolved*, That the members of this Faculty can never forget that his inflexible devotion to truth, honor and duty furnished for their guidance the highest and noblest standard of true manhood; that his ability and experience as a teacher placed him in the foremost rank of medical instructors; that his wisdom as Dean successfully guided the destiny of the Medical Department through many years of its severest trial, and that to him more than to any other is due its present prosperity.

“*Resolved*, That while deeply deploring the necessity that withdraws from active service our senior professor, yet our hearts are revived by the hope that time and rest will restore him to health and give to him many happy and useful years wherewith to bless his family and his friends and to benefit all of his fellow-citizens.

“*Resolved*, That Dr. T. G. Richardson is hereby chosen Emeritus Professor of Surgery.

“STANFORD E. CHAILLÉ, M. D., *Dean*.

“ERNEST S. LEWIS, M. D.,

“JNO. B. ELLIOTT, M. D.”

On motion of Profs. Lewis and Elliott, Dr. Samuel Logan, Emeritus Professor of Anatomy, was unanimously chosen Professor of General and Clinical Surgery in place of Prof. Richardson.

Appendix E.

RESOLUTIONS AND NOTICES IN REGARD TO THE DEATH OF
PROF. T. G. RICHARDSON, M. D.

IN MEMORY OF PROF. T. G. RICHARDSON, M. D.

MEDICAL DEPT. TULANE UNIVERSITY OF LOUISIANA, }
NEW ORLEANS, La., May 30, 1892. }

The following resolutions were this day unanimously adopted by the Faculty:

“ WHEREAS, Prof. T. G. Richardson, M. D., was called to New Orleans, as a citizen, by the Medical Department of the Tulane University of Louisiana, and continued his connection therewith from April 19, 1858, until severed by death, May 26, 1892, and having given to the Medical Department thirty-one years of active service—fourteen years as Professor of Anatomy, seventeen years as Professor of Surgery, and twenty of these years as Dean—and having also given, during the last three years of retirement from active service, the most convincing proofs of his great devotion to the present and future welfare of the Medical Department:

“ *Resolved*, That Prof. Richardson, endowed by nature with physical, mental and moral superiority, was pre-eminently distinguished for his culture and skill as surgeon and physician, which gained for him national reputation and rendered him one of the most instructive and popular of medical teachers; for exceptional scientific attainments, which, while broadening his views of nature's God, left him none the less firm in his Christian faith; for his courage and patriotism in war and his benevolence and philanthropy in peace; for his moderation and wisdom in council, and for his zeal and ability in executive administration; for his inflexible devotion to truth, honor and duty; for the strength of his friendships in adversity as in prosperity, and for the fidelity, tenderness and devotion given to his beloved and honored wife.

“*Resolved*, That by the death of this strong, wise and good man the Medical Department has lost its most valued friend and counselor, the medical profession its most honored representative in New Orleans, the State of Louisiana a citizen unsurpassed for patriotism and for worth, his friends a heart to love and a hand to help them, and his wife and family one who has left precious memories of a loving, virtuous and noble life.

“*Resolved*, That at the next Annual Commencement, April 5, 1893, memorial addresses shall be delivered on the life and services of Prof. Richardson; that the Rev. Dr. B. M. Palmer be requested to deliver the usual annual address, upon the above subject, and that the Dean be requested to deliver an address on the professional services of Prof. Richardson; and that the Dean is authorized to use his discretion as to the publication and distribution of these resolutions and also of the memorial addresses to be delivered April 5, 1893.”

STANFORD E. CHAILLÉ, M. D., *Dean*.

MINUTE.

Adopted June 4, 1892, by the Board of Administrators of the Tulane Educational Fund, touching the recent death of Dr. Tobias Gibson Richardson.

In the flow of succeeding generations the individual is soon lost in the current of human life, as though he had never been. Yet there are not a few who survive in memory and love, long after they passed from sight. Such a one we mourn to-day, as his name is placed amongst those of our remembered dead.

Dr. Richardson was one of the earliest chosen by Mr. Tulane to engage in the administration of his great educational trust; and it was largely through the wisdom of his choice the personnel of the Board of Administrators was originally constituted. By nature and by culture he was singularly fitted to be the guardian of a young and growing university. The eminence which he had himself attained in one of the noblest professions presented to the young a shining example of honorable and successful ambition; while his scholarly instincts and attainments pointed the way by which they might climb to equal distinction. Conversant with the science of his own

severe profession, with a mind enlarged by foreign travel and enriched by contact with the greatest thinkers in every department of knowledge, he has sat amongst us the wisest and most judicious of counselors—while his genial temper and uniform courtesy rendered him the most agreeable of associates. Through an act of princely generosity, conjointly with that of his noble and honored wife, a proud memorial—soon to be erected in the new medical college—will hand down his name as an equal benefactor to science and to the institution of which he was the guardian.

Endeared to us by so many associations, the members of this board can not but feel his death to be a personal bereavement, and a great loss to society at large. In token of this common and individual sorrow, this minute is adopted and spread upon our records, together with the resolutions which follow:

1. That in the death of Dr. Tobias Gibson Richardson the Tulane University of Louisiana has lost one of its earliest, most generous and devoted supporters and friends, and the Board of Administrators look upon his vacant seat with profound sadness, as depriving them of his wise counsels, and breaking the bonds of that pleasant companionship which is to exist henceforth only in affectionate remembrance.

2. That a copy of this minute and accompanying resolutions be sent to the family of our deceased brother as a token of the sincere sympathy with the deeper grief with which they are overwhelmed in this sore bereavement.

3. That this action of the Board be furnished for publication in the journals of the city, as an expression of the public sorrow which is felt in the loss common to the State and country at large.

CARTWRIGHT EUSTIS.

B. M. PALMER.

JAS. McCONNELL.

In Memoriam.

TULANE UNIVERSITY—DEATH OF DR. T. G. RICHARDSON.

The Faculty of Tulane University, at a called meeting, Monday, May 30, 1892, placed upon their minutes the following resolution:

“*Resolved*, That we learn with profound sorrow of the death of Dr. T. G. Richardson, a member of the Board of Administrators of Tulane University, and for a long period Dean of the Medical Department. For many years he has been a leader among the people of New Orleans in every good and useful work. As the head of the Medical Department of the University, many thousands of physicians have received instruction at his hands, and his exalted position as physician, surgeon, medical writer, teacher and man of science was recognized by his election as President of the American Medical Association and by the respect of the profession throughout the United States. He won an exalted position by his services in the camp and the hospital by his talents and by the austere integrity and noble professional example which he had evinced from his youth up. But in this city he was best known by the tenderness and skill he brought into the sick room, by his wide and abounding benevolence, and by the high example of righteousness of life he gave in every sphere and relation.

“Named by Mr. Tulane as one of the small committee by whom his board was selected, he took from the first an active and interested share in the organization and development of the University. The first meetings of the board were held at his house, and long after health and strength were unequal to the task he strove with iron will to perform his full share of every duty. A fearless man of God, who loved his neighbor, his name will survive among our people as a granite obelisk, solid, foursquare and scatheless, a memorial of righteousness and worth to generations to come.

“WM. PRESTON JOHNSTON, *President*.

“WM. O. ROGERS, *Secretary*.”

The following resolutions were passed by the Orleans Parish Medical Society June 25, 1892:

“WHEREAS, It is our sad duty to record the death of our honored and esteemed fellow-member Prof. T. G. Richardson, M. D., be it

“I. *Resolved*, That in the death of Prof. T. G. Richardson we recognize the loss of one whose life and work had raised him to eminence in the medical profession of the United States;

had given him a cheerfully accorded leadership in the States of the Gulf, and in his own State and city had rendered him the honored guide and counselor of our profession and our people.

“2. *Resolved*, That in the discharge, through long years of his duty as a teacher, he was clear, conservative and faithful, and, above all, wise in the judgment born of a wide and carefully stored experience.

“3. *Resolved*, That as a citizen he was faithful in the discharge of every civic duty; was untiring in his efforts for the advancement of knowledge and the public welfare, and, withal, practised a benevolence enriched by its lack of ostentation.

“4. *Resolved*, That in the spotless morality of his life and the unswerving rectitude of his character we recognize a power which, beyond his knowledge and his wisdom, shall remain with those whose lives he touched as a permanent influence for the building up of all that characterizes the Christian gentleman.

“JNO. B. ELLIOTT, M. D.,

“H. A. GABERT, M. D.,

“F. W. PARHAM, M. D.,

“*Committee.*”

COLLEGE OF PHYSICIANS OF PHILADELPHIA,
N. E. COR. THIRTEENTH AND LOCUST STREETS. }
SECRETARY'S OFFICE, PHILADELPHIA, June 8, 1892. }

Mrs. Tobias G. Richardson:

MADAM—At a meeting of the college held June 1 the following minute was adopted:

“The College of Physicians of Philadelphia hereby testifies to its sense of loss in the death of Dr. Tobias G. Richardson, of New Orleans, a (non-resident) Fellow elected in 1857, whose services to his profession and to humanity, in the exercise of his calling as a teacher and practitioner of medicine, have secured for him the lasting admiration of his fellow-workers and the grateful remembrance of those who have directly experienced the benefits of his skill and devotion.”

In communicating, by order of the College, this minute to you, permit me to add the expression of my personal sympathy and esteem.

Yours respectfully,

CHARLES W. DULLES, *Secretary*.

Dr. T. G. Richardson was ordained and installed December 23, 1860, a ruling elder of the First Presbyterian church of New Orleans, La., and the following were adopted by the session of said church:

The following resolutions are submitted for adoption, together with this Minute:

1. That whilst we deplore the loss to the church on earth of our brother's long and faithful service, we rejoice in the love of our Heavenly Father, which will gather at length all His children home to Himself in glory, and, in our sorrow, we wish him joy in his immortal ascension.

2. That we approve the action of the trustees in draping the pulpit in mourning on the occasion of his funeral, and we direct that the emblems of sorrow remain, without removal, until after the fourth Sabbath in June.

3. That a copy of this Minute be sent to the family of our deceased brother as an expression of our sympathy with them in their deeper grief; also that this Minute, with these resolutions, be sent for publication to the *Southwestern Presbyterian* of this city.

4. That in entering this Minute on the Sessional Records, the fuller biographical sketch herewith attached, and taken from one of the secular journals, be appended—affording a fuller history of one whose memory we desire to cherish.*

5. That a blank page of our Record Book be inscribed, as a tablet to his memory, with the name of Dr. Richardson, and with the dates of his birth, death, election to the eldership and term of official service in this church.

J. P. WOODS, *Clerk of Sessions*.

* See the *Southwestern Presbyterian*, New Orleans, La., June 9, 1892.



FIG. 1.

Obituary.

FROM THE AMERICAN FLORIST.

Dr. T. G. Richardson died at his home in New Orleans, May 26, 1892.

It may not be too late to pay an humble tribute to the memory of this unpretentious but truly great and good man. His death is a serious loss, not only to medical science, but to horticulture and floriculture as well. The large variety of hardy and half-hardy palms and other exotic plants successfully introduced and domesticated by him will ever remain living monuments to his love for and services in behalf of Southern horticulture and floriculture. "Peace to his soul."

REPORT OF A CASE OF MOLLUSCUM FIBROSUM PENDULUM
WEIGHING THIRTEEN POUNDS.

By RUDOLPH MATAS, M. D.,

VISITING SURGEON CHARITY HOSPITAL, ETC., NEW ORLEANS.

Early in October, 1892, I was invited by Dr. W. Hincks, of this city, to examine the subject of the following observation.

Azelie Le B., a light colored woman, aged 42 years, was born in this city, and has lived here all her life. She is the daughter of a white father and a mulatto mother, who was a slave, born in Virginia. Her father died suddenly when she was a child. Her mother died twenty-five years ago in consequence of an attack of sporadic cholera. Her mother gave birth to four daughters, all of whom are living and free from hereditary disease. The oldest is now 70 years of age, and has three children, all of whom are well. The second daughter is 66 years old, and has never married; she is well. The third is 43 years of age, is married and well, but has no children. The fourth is Azelie, the subject of this sketch, who is single, and is now, as previously stated, 42 years of age, and the only member of her family who has presented evidences of permanent cutaneous disease. The patient has never done much hard work, has a very rudimentary education, and is of a rather slow but fair intelligence for her class. She began to

menstruate at the age of 15, and at 39 she reached the climacteric. She appears to have been fairly healthy up to her twelfth year, when she noticed for the first time that a small swelling or tumor began to grow on her abdomen close to the umbilicus. Numerous other growths, which were mistaken for "wens" or warts, appeared simultaneously all over her body, but the first tumor which had appeared to the left of the umbilicus grew more rapidly than the others and especially attracted her attention. With an indifference characteristic of her race, she allowed this tumor to grow progressively under her eye for twenty-eight years without complaining of it to any physician until, about three years ago, while going to market, she fell on her market-basket and considerably bruised the growth. After this traumatism the tumor appeared to grow more rapidly, and from the size of a child's head it soon reached its present proportions. (See accompanying photographs.*) This tumor became pedunculated, and dragged so heavily from her abdomen that she was compelled to take to her bed, in which she has been confined these last three years. The patient's general health has suffered in consequence of this prolonged rest in bed. The forced dorsal or lateral decubitus and the suppression of almost all active exercise has favored the development of adipose tissue, and she has grown stouter, especially about the body and limbs, since her confinement in bed. Notwithstanding this comparative *embonpoint*, she is anæmic, and her skin presents an unhealthy sallowness. The digestive functions are sluggish, the appetite indifferent. In addition to the natural impediment that would be offered to active bodily exercise by the large growth that hangs from the abdomen, there are marked apathy and languor, which are more probably the results of an inherent disposition to indolence than the morbid effects of disease.

When first seen and the body is uncovered, the patient presents a striking appearance. The whole body is covered with hundreds of small growths, which vary from the size of a goose-egg to that of a split pea. These growths are espe-

* I am indebted to Dr. O. L. Pothier for these photographs, which were taken at the patient's house under very disadvantageous circumstances and at the cost of much personal inconvenience.

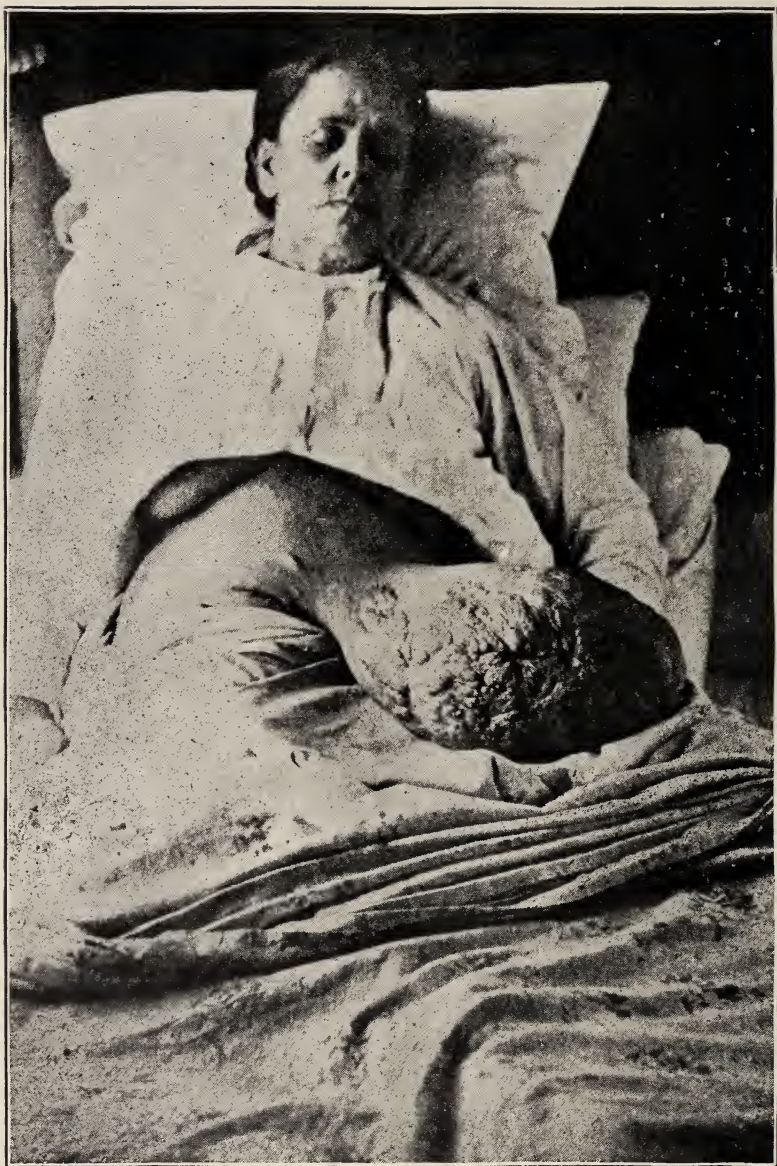


FIG. 2.

cially numerous and large over the back and the extensive surfaces of the upper and lower extremities. They are numerous but very small in the face, chin and neck, but they are found everywhere on the cutaneous surface, with the exception, perhaps only, of the palms of the hand and soles of the feet. Attention is, of course, at once attracted by the monster growth which hangs from the abdomen. It begins in a broad, thick pedicle, which is continuous with the whole thickness of the abdominal integuments; here it is over twelve inches broad and three inches in thickness; from the narrower pedicle the tumor enlarges and becomes broader in a pyriform manner until it reaches its free, rounded, but hard and rough extremity. When the patient stands the tumor drags down to the knee, and the pedicle becomes thinner and more pedunculated. When looked at in profile, and when the patient sits in bed, as shown in Fig. 1, the appearance of the tumor is suggestive of a huge phallus with a warty glans. On palpation the tumor has a distinct fibro-lipomatous consistence, especially on its attached portion, but the free terminal extremity is hard, verrucose, and uniformly thickened, as in scleroderma. A few large veins are noticed on the surface of the pediculated portion. The tumor measures in circumference at its broadest portion $23\frac{1}{2}$ inches, and is in length 13 inches, the pedicle 14 inches. The color of the tumor is that of the normal skin, with which it is continuous, excepting at its free extremity, where the skin is swarty and presents a dark red dish cicatricial discoloration.

A careful examination of the smaller growths revealed all the characteristics of molluscous formation in all stages of development. The tumors all have a soft feel which is very different from that of lipoma, and the thin skin which covers them is slightly darker than that surrounding them. When the tip of the finger is pressed into the centre of the smaller growths a sensation is conveyed through the thin covering of the tumor as if the whole thickness of the derma had been pierced by a hole. The more mature growths feel very much like the empty scrotum of a child, as aptly suggested by Bazin. The smaller tumors may be likened (as again suggested by this observer) to a soft raisin free from seed.

The diagnosis of molluscum fibrosum was therefore plain enough, and the operative removal of the large growth promptly recommended.

On October 15, after previous antiseptic preparation and anæsthesia of the patient with chloroform, the tumor was exsanguinated by uniform elastic compression with the Esmarch bandage. It was then dragged away as much as possible from the abdomen, with the object of rendering the pedicle as thin and tense as possible; and while the tumor was still compressed by the elastic bandage the pedicle was transfixed with a stout Crofford needle and a double-heavy silk ligature carried through it. In this way the pedicle was bisected by the thread and a chain-ligature applied as closely as possible to the abdominal surface. As an additional security, a round rubber cord was wound tightly several times around the pedicle, on a level with the ligature, and held *in situ* with a strong hæmostatic clamp. The whole mass was then quickly amputated with the broad thin edge of a razor. The stump was perfectly smooth and even, and was completely controlled by both the silk ligature and electric cord, so that the large vessels of the pedicle were all leisurely recognized and ligated. The central nutrient vessel was an artery, larger than the femoral, and it was accompanied by two correspondingly large veins. Numerous other pale vessels were held in the same arterio-venous bundle, which had all the appearance of enormous lymphatics. After the ligation of the remaining vessels the prophylactic transfixion-ligatures were removed, and the pedicle stump was spontaneously obliterated, so that a long wound alone remained, which measured over thirteen inches in length. This was readily closed with a sufficient number of silver and catgut ligatures. An iodoform and sterilized gauze-dressing was applied, and one week afterward the sutures were removed. Union *per primam* took place throughout the wound, and with the exception of a small stitch-abscess, caused by a gut-suture, the recovery of the patient was uneventful.

The large tumor weighed thirteen pounds; a smaller growth, about as large as a chestnut, was removed from the



FIG. 3.

external surface of the right deltoid region, and was given to Dr. Pothier, Assistant Pathologist of the Eye, Ear, Nose and Throat Hospital, for microscopic examination.

*
* *

Though fibroma molluscum multiple is a comparatively rare disease, it is probably more prevalent in the South than in other sections of the country, as we would be led to anticipate by our knowledge of the known special proclivity of the negro race to the development of fibroidal neoplasms in other localities of the body. Blanc, whose experience in our Charity Hospital entitles him to special authority, only reports four cases out of a total of 2023 skin-patients whom he treated in the New Orleans Charity Hospital from October, 1885, to July, 1891,* and of these four cases three were colored and one white, showing an apparent preponderance in the negro race. The comparative rarity of the affection is attested by the statistics of the American Dermatological Association, which, according to Duhring, show nine out of 16,863 cases of skin disease, though it is manifest that in English practice it is still rarer, as McCall Anderson says: "My statistics of 24,891 consecutive cases of skin diseases show only one solitary case." As compared with Anderson's experience, it is evident, according to Blanc's report, that molluscum fibrosum is much more frequent with us, and that this is due to the large negro population in the Southern States can not be doubted.

*
* *

The size of this tumor is unquestionably its most remarkable feature; but, while the growth is unusually large, it is not unique, even in this respect. An investigation of the literature on the subject readily proves this. Pozzi removed a molluscum pendulum which weighed eleven kilogrammes (29 pounds). It hung from the mamma to the thigh, and was allowed to grow ten years before the patient consented to its removal.† The case of Kosinski, in which the tumor weighed 35 pounds.‡ The case of Heyland, in which the

* "A Review of Dermatological Practice in New Orleans," by Henry Wm. Blanc. (*N. Y. Medical Journal*, March 12. 1892.)

† A. Broca, "Traité de Chirurgie;" Duplay and Reclus, Vol. I, 1890.

‡ Crocker, "Diseases of the Skin," Am. Ed., 1888.

growth weighed $32\frac{1}{2}$ pounds, is reported by Virchow.* Chassaignac, in 1866, reported a case to the Société de Chirurgie, in which a molluscum pendulum hung from the upper portion of the chest to the pubis. Still more remarkable are three cases in which this disease is associated with the peculiar laxity of the skin known as dermatolysis. Such was the case described by V. Mott in 1854, under the designation of pachydermatocele, in which a large and movable fold of skin extended from the ear to the umbilicus. Nelaton described a case in which a fold of skin fell back like a Venetian mantle from the nucha to the sacrum, and forward toward the epigastrium. The case of Maracci,† in which the tumor extended from the nucha down to the sacrum and could be wound around the arm and shoulder, and was so heavy that it dislocated the sterno-clavicular articulation. The classic case of Eleanor Fitzgerald, reported by John Bell,‡ in which an enormous fold measuring over four and a half feet, and which, beginning behind the ear, in the back of the head, covered the neck, chest and abdomen, fell in voluminous coils resembling masses of intestines. When the woman was seated she had to steady this monster growth over her knees with her two hands.

Other remarkable cases of this kind are reported by Lücke, Fritsche, Stokes, Wedden, Cooke, Treves and others.

SOME PRACTICAL REMARKS ON CHLOROFORMIZATION.§

BY J. HARRIS PIERPONT, M. D., EX-PRESIDENT FLORIDA MEDICAL ASSOCIATION,

It would be difficult to find a subject in the medical world which has claimed so much attention chemically, experimentally and theoretically as chloroform during its comparatively short existence of fifty six (56) years.

During this period the most profound scientific researches have been made to eliminate the inherent fatal properties of this otherwise ideal anæsthetic. Innumerable essays and

* "Die krankh. Geschwülete," Vol. I, p. 325.

† "Giorn. Ital. dell. mal. ven. 1879"

‡ Bell: "Principles of Surgery," Vol. III, part 1, p. 32, London, 1806.

§ Read before the Florida Medical Association, session 1893, Jacksonville, Fla.

monographs have almost choked the channels of medical literature, in which their authors claim to have discovered the long and earnestly sought for secret, with the unfailing result that chloroformization of to-day does not materially differ from that practised by our forefathers of a generation past.

Multitudinous experiments have been made upon the lower order of animals to determine the mode of death from chloroform poisoning in order to appreciate its approach in man and to avert it if possible.

Much has been done by the Hyderabad Commission in the East toward a settlement of this mooted question, and one would infer from these comprehensive researches that there remained but a minimum of danger in chloroformization, provided the laws framed by this commission be strictly adhered to.

Prof. H. C. Wood, of Philadelphia, has, in my opinion, successfully controverted the absurdly dogmatic deductions of the Hyderabad Commission concerning the mode of death in chloroformed dogs, and I wish here to offer my protest against its dangerous and misleading statements. But this subject will come up for consideration later on.

Discussions and controversies upon the subjects, "The Comparative Safety of Chloroform versus Ether" and *vice versa*, have alike failed to elicit much practical information that will relieve the chloroformist of that dread of accident which is ever properly entertained during the administration of this anæsthetic. Feeling assured, therefore, that the "specific"—if I may so speak—for chloroform poisoning remains yet involved in mystery, it is clearly our duty to throw around our patients as many safeguards as skill and a thorough knowledge of the subject will permit, and so diminish the danger to a minimum.

The question then arises, How is this to be accomplished? It is the purpose of this paper to throw out hints which have developed as a result of careful study and observation. The Hyderabad Commission, of which mention has already been made, asserts that chloroform kills from respiratory paralysis, the heart continuing to act a variable period of time *after* respiration ceases, and furthermore says: "The practical

“outcome of the research would appear to be that deaths from chloroform are not inevitable; that they are therefore preventable, and by due care in its administration they may be with certainty avoided; * * * and has no doubt whatever that if the above rules (see report) be followed chloroform may be given in any case requiring an operation with perfect ease and absolute safety, so as to do good without the risk of evil.”

It will be unnecessary for me to go over the ground of refuting their assertions, since Prof. Wood has already done so.

But there remain a few points to which I wish particularly to call attention. In the first place, the subjects used for experiment were healthy pariah dogs, ignorant and unsuspecting, and assuming that all of them died from cessation of respiration, notwithstanding Prof. Wood's experiments, which prove the contrary, it is readily seen that man, suffering from some pathological condition, the analogy is weakened or completely destroyed; hence the result of the experiments upon dogs, from which such important deductions are drawn, fails to demonstrate the object for which it was formed. And furthermore, a great number of deaths, from cardiac failure, which can not be questioned, are on record, one having occurred recently in the practice of a colleague in this city.

It is also unnecessary to review all the usual procedures of administering chloroform, of which every physician must have some knowledge, but I wish to speak of some points that I have found of great utility and which enable me to use this anæsthetic with less trepidation than formerly.

In the second place, I desire most emphatically to denounce the practice in vogue at colleges and hospitals of placing the administration of the anæsthetics into the hands of recent and inexperienced graduates and raw *nurses*, so that the skilled physicians or surgeons may participate in the manipulative part of the operation or procedure. This, in my opinion, is a mistaken idea of fitness in the congregation of a number of medical men, since it would seem that the most skilled should have charge of the most difficult part of any operation.

When a patient has been made ready for chloroformization his fears should be set at rest as effectually as circumstances will allow, as this plays a most important part in an operation, deaths having been attributed to fear alone, as shown by the following extract from a paper by Dr. B. W. Richardson, published in *The Asclepiad*, first quarter, 1890:

“In the first place, in man the element of fear may play even a fatal part, as has often been shown. While an animal goes to sleep with the anæsthetic automatically, without a suspicion that it may never wake again, the very thought of dying under the anæsthetic of itself, whether expressed or concealed, involves serious risk to a human subject who has heard of the dangers it has to encounter, and firmly believes in them all. Fear may be the only explanation for many deaths, where the wrist pulse stops suddenly and the respiration soon afterward before any of the usual phenomena of asphyxia have appeared. It also explains the frequent failure of artificial respiration in such cases; in animals it is almost always successful.”

It is my practice to reassure patients by giving a hypodermic of morphine and atropine in a menstruum of whiskey or brandy, and at the same time to tell them that the danger from the chloroform has been removed; as it has, in my opinion, since it unquestionably lessens the stage of intoxication, adds tone to the cardiac muscles, quells cerebral excitement, lessens the susceptibility to shock, relieves pain after anæsthesia, and from an economic point of view less chloroform is required after complete anæsthesia has been induced.

The next step—and one practised quite extensively—is the examination of the heart, thereby augmenting materially the patient's fears. Many times have I been told by patients that they can not take chloroform on account of their heart. The idea of a cardiac defect, be it ever so insignificant, being a contra-indication seems to be rooted in their minds, which time can not erase. By first feeling the pulse, which can be done in a casual way and without arousing the patient's suspicions, a fair knowledge can be had of the heart's action; and when a few inspirations of the vapor have blunted the patient's perceptive powers a thorough examination can then

be made, and if chloroform is found to be contra-indicated ether may be substituted without alarming the patient or friends. However, there are comparatively few organic cardiac lesions which will not permit of the use of chloroform, since I have administered it in some of the gravest forms.

After the first injection of whiskey the syringe should be recharged with either whiskey or some preparation of ammonia, in order to immediately avert a threatened syncope. I find it very useful to make an occasional injection of whiskey throughout prolonged anæsthesia in surgical cases, acting upon the principle that it is far better to prevent than to remedy syncope.

Now that the patient has reached the stage of complete anæsthesia, the administrator should be more on the alert than ever, since herein the greatest danger lies. With all due respect to my Alma Mater, I was taught, in administering chloroform, to pay strict attention to the patient, and not to let my thoughts wander to the operation (I select a surgical case, for example), thereby neglecting my part of the procedure, and endangering the life of the patient. This is fallacious teaching, inasmuch as it lacks comprehensiveness. Surely it appears to be the duty of the chloroformist to fix his attention upon his part of the operation; but in my opinion this *part* embraces the whole procedure from beginning to end; in other words, the anæsthetist should superintend the whole operation.

The mere fact of holding the inhaler, and watching the pulse and respiration, are only integral parts of a whole. *Pain* is the antidote to chloroform poisoning, *par excellence*, and should claim the closest attention, as much so as the heart and the respiratory act. Chloroform is administered not so much to produce insensibility and muscular relaxation as to combat pain; therefore the administrator can not possibly give chloroform intelligently unless he has a proper appreciation of the amount and intensity of pain being produced. When the pain is intense the chloroform should be pushed, and *vice versa*, when it ceases, or is greatly diminished. This is why deaths have occurred while extracting teeth under chloroform, the

pain being intense for a few moments only, and out of proportion to the amount of chloroform requisite to antidote it.

Another very important point which the preceding paragraph will illustrate, and one which should be at all times uppermost in the mind, is the fact that the *residual air* contained in the lungs becomes highly charged with chloroform vapor, which will maintain complete anæsthesia several minutes after the inhaler has been removed; and it is here, as in extracting teeth, that patients are apt to be overpowered by complete anæsthesia, plus the chloroform contained in the residual air, when pain has suddenly ceased. This occurs when the cutting part of an operation is finished and the hæmorrhage is being controlled, operators often not wishing to stop the anæsthesia until the sutures have been taken. For example, five minutes or more has been consumed in arresting the hæmorrhage, and the patient has regained partial consciousness, so it becomes necessary to again produce anæsthesia during the suturing, which is disproportionate to the little pain inflicted by passing needles through already partially benumbed tissue, and the patient unexpectedly drops off. We all read of deaths occurring from chloroform *after* the operative procedures have been completed, and I think the above will explain many of just such cases.

Of some minor details I shall speak briefly. The chloroformist should at times during prolonged anæsthesia urge the operator to economize time, as he (the chloroformist) can best appreciate the patient's condition regarding shock and a fatal tendency from prolonged anæsthesia, as often a few minutes only will determine the result in the patient's favor.

Various forms of apparatus have been devised and used to facilitate and lessen the danger of chloroformization. All that I have yet seen have objectionable features of some kind, being either too bulky to be carried about the person or not easily made aseptic. I have devised an instrument which is free from these objections, being a spiral compressible cone, that can be made to assume a flat oval shape to fit a coat pocket. When open, a sterilized towel is folded and pinned around the frame, making a complete and safe inhaler.

It should always be borne in mind that a free admixture of air is absolutely necessary in administering chloroform, and no instrument or apparatus is safe which does not fulfil this requirement.

In closing I wish to call attention to the great variation in course, of the temporal artery and its branches, so it is well to always locate the artery to be used and to fix its position by its relation to the margin of the hair, eyebrows, zygomatic process, wrinkles or scars, since if not easily found during chloroformization, syncope may be mistaken for a loss of arterial pulsation. A mattress or pillow should never be allowed to remain under the patient's head, without a covering which will not absorb and retain chloroform vapor, particularly when the patient assumes either the lateral or prone position. I came very near experiencing a serious accident as a result of this neglect.

The patient being in Sims' position, ceased to breathe immediately after the operation was concluded, and was with some difficulty restored. The cone had been removed some minutes before, so the chloroform contained in the pillow was sufficient to cause the accident. An oilcloth, or even newspaper, placed under the patient's head will fulfil all requirements.

Not only have we to consider the moral effect of a death from chloroform, but also the legal, as evidenced by the following, taken from the 1889 edition of the "Annual of the Universal Medical Sciences:"

"A death from chloroform at Sydney has been followed
"by a lawsuit by the husband of the deceased, and has
"resulted in a verdict of 'guilty' and an award of £200 damages, on the ground that the anæsthetic was improperly
"administered and the patient subsequently neglected.
"Knoggs, in an article read before the B. M. A., states that
"nine deaths occurred from anæsthetics in the colony during
"1885, 1886 and 1887. They formed the subject of inquiry
"by Parliament, and he pertinently asks: Who is responsible
"—the operator or the administrator of the anæsthetic? and,
"at the same time, how far is the administrator of the anæs-

“thetic, as well as others who may be present, responsible for “the operation?”

If more care and consideration were given the study of this subject fewer deplorable deaths would adorn (?) the pages of medical history.

Proceedings of Societies.

CLINICAL SOCIETY OF MARYLAND.

BALTIMORE, March 3, 1893.—The 277th regular meeting was called to order by the president, Dr. Wm. E. Moseley.

Dr. J. W. Chambers exhibited a patient upon whom he had operated in November, 1892, for injury caused by gunshot wound. The upper portion of the humerus and the lower end of the ulna were resected and two fingers were amputated. About 6 inches of the upper end of the humerus were removed and 3 inches of the lower end of the ulna. It was a question of amputation or resection. Dr. Chambers thinks that most any condition of an arm is preferable to no arm. An arm is worth something for appearance sake, even if it is not useful, and it helps to keep away the curve of the spine which occurs after loss of an arm. From the statistics obtained during the civil war it would appear that there is somewhat greater danger from resection than from amputation. In six cases resected by Dr. Chambers there has been one death. This death occurred in a man of 70, who died of pneumonia not long after the operation. Recently five primary cases have been reported without a death. With the present methods resection will probably give as good or better results than amputation. This is so with the thigh and there is no reason why it should not be with the humerus. It is usually stated that when we remove more than 4 inches of the humerus we can not expect a very useful arm. There is one case, however, reported in which 6 inches were removed and the man had a useful arm and could lift 200 pounds.

Regarding resection of the ulna, the text books state where you have a gunshot wound or severe injury to the lower end of either radius or ulna it is better to amputate, or to resect an

equal portion of both, otherwise you will have the hand left in a distorted position. The two cases shown by Dr. Chambers show that this is not necessarily the case, because in neither of them is there any twisting or turning.

Dr. Joseph H. Branham said that these two cases illustrate very forcibly that under modern antiseptic methods limbs can be saved which a short time ago would have been amputated without any hesitation. It would seem that, unless there is some injury besides that to the bone and shoulder, which makes amputation necessary, with antiseptic precautions, the results will be just as good in the partial excision of the upper end of the humerus as in amputation at the shoulder joint. Of course if there is injury to the more important vessels, then the excision would be improper and bad results might follow. Dr. Branham had treated a case somewhat similar to the one exhibited by Dr. Chambers. He saw him two weeks after the accident. The head of the humerus was destroyed and the fragments of bone that were loose were picked out with forceps. An abscess afterward developed which opened up the axillary regions very extensively. This was drained with a tube and irrigated. The boy made an excellent recovery and now has a good position as clerk in a railroad office. Not much deformity has resulted.

Dr. J. H. Branham read a paper on

EXCISION OF THE PILE-BEARING MEMBRANE FOR HEMORRHOIDS
(WHITEHEAD'S OPERATION).

An advance in the treatment of hemorrhoids was undoubtedly made in 1886 when Whitehead reported his method of total excision of the pile-bearing membrane to the British Medical Society. At that time he had operated on three hundred cases with uniformly good results. The cases which should be submitted to this operation are those severe ones in which the disease is extensive, involving the whole circumference of the mucous membrane lining the lower part of the rectum. Dr. Branham has employed the operation for over three years, and while the number of his cases is not large the results have been very satisfactory and he strongly favors the method, although it has been condemned by nearly all the prominent rectal specialists. The different steps in the operation were described. A 1-2000 solution of bichloride of mercury is the antiseptic used. The wound is closed by a continuous catgut suture carried through the skin and the tissues at the bottom of the wound and through the severed mucous membrane. Dr. Branham's cases number 15. In no instance has the hæmorrhage been severe and in none has there been secondary

hæmorrhage. No abscess or septic infection occurred in these cases. Union was primary in most of the cases, but a slight suppuration occurred in several instances. The advantages of this operation over other operations, especially the ligature and the clamp and cautery, are, that the ligature leaves the wound open to granulate and is more liable to infection and secondary hæmorrhage, is less thorough and is apt to be followed by a return. The clamp and cautery while leaving the wound at first aseptic is followed by a large granulation and consequently is more liable to cause contraction with symptoms of stricture.

Dr. S. T. Earle did not think that as a rule rectal specialists condemned the operation. They simply did not recommend it in all cases of hemorrhoids. They nearly all speak of it in high terms in cases for which it is especially adapted. Dr. Earle had done the operation repeatedly, but only finds it necessary in about one out of six cases. He limits his cases to those where there is a varicose condition of the systemic veins, together with internal hemorrhoids; in this condition no other operation can take its place. He has had in one case, where there was considerable prolapse of the mucous membrane together with the hemorrhoids, a return of the prolapse in one portion after excision by Whitehead's method. This prolapse was excised and there was no further trouble. Dr. Earle has never met with any hæmorrhage to speak of in this operation and never had any secondary hæmorrhage to occur. This operation is unnecessary in the majority of cases. Where there are distinct and separate internal hemorrhoids it is much easier to excise them and the results are just as good.

Dr. Hunter Robb took exception to the use of bichloride of mercury for disinfecting the rectal mucous membrane, and to the use of catgut as a suture material. From the uniformly fatal results produced by corrosive sublimate in irrigating the peritoneal cavity of dogs with solutions of 1-60,000, he is inclined now to hesitate before employing this agent on mucous, serous or incised surfaces. It has been proven that corrosive sublimate in solution even as weak as 1-60,000 will produce a superficial necrosis of the tissues, and it has also been shown that even in strengths of 1-2000 or 1-3000 the drug is not always germicidal in its action. It would not seem advisable therefore to use a substance that causes destruction of the tissues, when in addition there is no certainty that the micro-organisms will be killed. By producing a necrosis of the tissues the normal resistance of the part would be interfered with and any virulent bacteria that might originally have been present or those that came subsequently in contact with the wounded sur-

face would be much more likely to give rise to an infection of the part. He said that he had repeatedly with some modifications, Dr. Halsted's experiments of irrigating the peritoneal cavity of dogs with bichloride of mercury. He had used 700 c.c. of freshly made aqueous solutions of corrosive sublimate in strengths of 1-40,000 and 1-60,000. Immediately after using one of these solutions the peritoneal cavity was irrigated with the same quantity of sterile warm water and then sponged as dry as possible. In from twelve hours to four or five days the animals all died.

The lesions found at the autopsy were those produced by the toxic effects of corrosive sublimate. They consisted of marked diphtheritic deposits on the intestinal mucous membrane, with intense hyperæmia, particularly in the large intestine and rectum. Although in some instances solutions of bichloride of mercury may be used in the peritoneal cavity without any unfavorable sequel, the results of these experiments with dilute solutions would necessarily lead one to be most careful, since the susceptibility of a given individual to its evil effects can never be predicted.

As to the use of catgut, it seemed to him that it has been clearly proven by the experiments made by Dr. Ghrisky and himself that this substance is a most favorable suture material for micro-organismal invasion, and besides, it is impossible to be absolutely sure of sterilizing a catgut sufficiently strong to be of use. In their experience, silkworm gut had proven to be the suture material most resistant to bacterial growth, and it has the advantage that it can be easily rendered sterile.

Whitehead's operation for hemorrhoids is one that he thought it rarely necessary to employ. The operation that he performs is that carried out by Dr. Kelly. The apex of the hemorrhoid is held with a pair of bullet forceps by a tenaculum, and an incision made through the superficial layers of tissue encircling its base. A double ligature is passed through the centre of the hemorrhoid at the base, and each ligature tied separately in the line of incision, one anteriorly and one posteriorly. The portion of the tissues beyond the constriction is then cut off and the pedicle lightly cauterized. A simple sterile protective dressing is applied. This method of operation has given very satisfactory results.

Dr. J. W. Chambers thought that Dr. Branham's cases showed at least that good results can be obtained by Whitehead's operation. He usually does Smith's operation with clamp and cautery. The matter of putting on a ligature and then using a cautery, as described by Dr. Robb, is doing two operations instead of one. The clamp and cautery is unquestion-

ably the best method in simple cases. As to washing out the rectum with bichloride solution, that is hardly as dangerous as Dr. Robb has suggested. It is hard to draw comparisons between the effects of flushing out the peritoneal cavity of a dog and the irrigation of the rectum that has been subject to severe congestions. Of course it is impossible to make the rectum or the mouth perfectly aseptic, but there is something about these two localities that makes their tissues unusually resistant to infection and wounds in these regions do particularly well.

Dr. W. S. Gardner thought that there was something of a scare about bichloride poisoning. Leopold keeps his sponges in a 1-1000 bichloride and swabs out the abdominal cavity with the solution. During a Cesarean section he has seen Leopold swab out the uterus and wipe off the outside of that organ with this solution and the patient did perfectly well. Dr. Gardner has a great many times washed out the dilated puerperal uterus with a solution of 1-4000 bichloride with no trouble resulting. Certainly the dilated uterus and vagina offer a very much larger surface for absorption than you can get in the most distended rectum.

Dr. Wm. E. Moseley thought that it was hardly proper to make comparisons between bichloride that is absorbed through the peritoneal membrane into the circulation and then produces lesions in the rectum and the effects due to irrigating the surface of the rectum. He does not use bichloride in the peritoneal cavity, but has seen it used repeatedly with no evil results. The method of transfixion as described by Dr. Robb was the oldest one that Dr. Moseley had ever seen or practised. It is a very good method, but not new.

Dr. Earle said that he did not hesitate to use bichloride in the rectum, but always takes the precaution to wash it out afterward with sterilized water. He had once seen a diarrhœa after the use of bichloride. We can not expect to make the rectum aseptic, but should try to make it as nearly so as possible.

Dr. Branham named Matthews, Kelsey and Allingham as amongst those who condemned the Whitehead operation. As to the use of bichloride: Dr. Robb says that $\frac{1}{8}$ of a grain will kill a dog. Human beings with syphilis take $\frac{1}{8}$ of a grain three or four times a day without any evil results. The peritoneum is an absorbing membrane and if much bichloride solution is left in it death may result; but the lower portion of the rectum is lined with pavement epithelium and histologically does not differ from the skin, and there is probably no more likelihood of poisoning from bichloride in applying it to this

tissue than in applying it to the skin. This portion of the rectum is an excreting and not an absorbing tissue. As to the use of catgut, there seems to be some extra dangers of infection from it. The disadvantage of silk is that it has to be removed and causes some irritation.

Dr. J. Whitridge Williams read a paper on

THE TREATMENT OF POSTERIOR DISPLACEMENTS OF THE UTERUS.

After outlining the various modes of treatment and giving more in detail Duhrssen's method for vaginal fixation, Dr. Williams summed up his own ideas as to the proper course to be pursued in the treatment of these cases as follows:

In all cases in which the uterus is movable, it should be replaced by bimanual manipulation and a suitable pessary introduced.

In cases in which the uterus is adherent, we should attempt to free it from its adhesions by massage and the use of vaginal applications, and failing in them, we should resort to Schultze's methods of loosening the adhesions under an anæsthetic.

If by these means we are able to free the uterus from its adhesions, it should be replaced and a suitable pessary introduced. If necessary the vagina and perineum should be repaired by a plastic operation.

It is only in cases where the pessary treatment is of no avail, or in cases in which the uterus can not be freed from its adhesions, that there should be any thought of resorting to operative treatment, and then only when the retroflexion gives rise to symptoms of considerable gravity.

The practice of operating at once upon a case of retroflexion, without any attempt at more conservative treatment, can not be reprehended too strongly.

The operative treatment of retroflexions, uncomplicated by tubal or ovarian disease, should differ as the uterus is movable or markedly adherent.

If the uterus be movable we do not consider ventral fixation a justifiable operation, and would most emphatically recommend some form of vaginal fixation—preferably Duhrssen's method. We have tried this method ourselves, and from our limited experience are inclined to believe that it will accomplish all that Duhrssen claims for it.

If, on the other hand, we have not succeeded in freeing the uterus from its adhesions, and the symptoms are sufficiently grave to justify a capital operation, there can be no doubt as to the propriety of performing cœliotomy and stitching the uterus to the abdominal walls by one or other of the methods mentioned.

‘We do not wish to be understood as being opposed to ventral fixation, for we are not; but we are opposed to indiscriminate and reckless operating upon this class of cases.

The consideration of the treatment of retroflexions occurring as complications of serious tubal or ovarian disease resolves itself into the treatment of the primary affections.

Dr. B. B. Browne spoke of two classes of cases which it was extremely difficult to treat by the use of pessaries. Those in which the uterus joins the vagina without any projection of the cervix into the vagina, and those in which there is a retro-lateral version. In regard to the ventral fixation of the uterus, he thought that in a good many cases it is a very desirable operation, especially in those cases where the tubes and ovaries are diseased and have to be removed. In cases of retroversion accompanied by tubal or ovarian disease he always fixes the uterus at the time he removes the tubes and ovaries. In a great many cases of retroversion, dilatation and thorough curetting and the use of the pessary for a month or two will work a permanent cure. Many of these cases are simply cases of chronic sub-involution, and curetting and tamponing will reduce the size of the uterus, and it will remain in place without a pessary after two or three months’ support.

Dr. Wm. E. Moseley said he had had the pleasure of seeing Dr. Williams operate in two cases by Duhrssen’s method of vaginal fixation, and the result in one case which he examined afterward was most gratifying. This operation is not known in this country. It certainly seems to be a very reasonable one, and will, in many cases, take the place of ventral fixation, or other intra-abdominal operations for displacements.

Dr. Hiram Woods read a paper on

DISEASES OF THE MASTOID REGION, WITH AN ANALYSIS OF
FORTY-ONE CASES.

All the cases showed more or less external evidence of bone disease, most of them presenting the symptoms of pain, swelling over the mastoid region, fluctuation and prominence of the auricle.

With reference to the association of mastoid disease with lesions in other parts of the ear, these forty-one cases divided themselves as follows: Occurring with disease in the middle ear, 35; occurring with otitis externa, 5; of uncertain nature, and possibly primary mastoiditis, 1. Of the 35 cases associated with the middle ear disease 12 developed in acute, 20 in chronic suppurative otitis media, 3 in acute aural catarrh without perforation of the drum membrane. All of these cases demanded surgical interference, but three would not consent.

One of these, a girl of 17, had a bulging Schrapnells membrane without perforation, and fluctuating mastoid swelling. She recovered slowly under mercurial treatment. She had, the writer thought, that form of mastoid disease called by Sexton "Dissecting tympano-mastoid abscess." The other patient was a baby with chronic otorrhœa. It died of meningitis. The third unoperated case was one of necrosis. Upon thirty-two Wilde's incision was done, with such further surgical procedure as this operation showed to be necessary. Two of these cases had acute aural catarrh without perforation. Pus was found external to mastoid cortex, but no opening could be discovered in cortex.

Both recovered promptly. These cases the writer classed as tympano-mastoid abscesses. Of the remaining thirty, in twenty a carious spot was found in the cortex, in different situations, leading to an abscess cavity; in six, more or less extensive necrosis was discovered; in four, pus was found outside the cortex, and the latter was unaffected. The opening of the abscess cavity and the drainage thus established removed all mastoid symptoms in these twenty patients. In seventeen, the pre-existing otorrhœa is known to have ceased. This point was not recorded in the other three. Of the cases with necrosis two recovered as soon as the sequestrum was removed; two of the others had a slight otorrhœa persist. A fifth had too much necrosis to allow of complete removal, and would not consent to thorough operation.

Of the four with no pus external to the cortex and intact cortices, one was chiseled, and made an excellent recovery; two obtained relief from Wilde's incision and left the hospital. The fourth, upon whom it was intended to do the chiseling operation, had a discharge into the tissues of the neck and recovered in this way.

The five cases, associated with otitis externa, presented the classical symptoms of mastoid disease, but there was neither history nor symptom of middle ear disease. Otitis externa was present.

The forty-first case, classed as a possible primary case, was a child of 2½ years old. There was no history of ear disease, but there was a large mastoid abscess. The rest of the ear looked healthy, save one point in the drum head, which may have been a healed perforation.

Dr. Woods reviewed the constitutional treatment of mastoiditis, and expressed the opinion that reliance should not be placed upon it for any considerable time. Wilde's incision was better antiphlogistically and therapeutically. He thought, too, that the relief afforded by this operation, the occurrence

of mastoid symptoms in connection with other ear disease than inflammation of the external ear, the possibility of there being another course for the spread of inflammation from the tympanic cavity to the mastoid, other than through the antrum and cells, made the early and thorough opening of the mastoid cells, of late years so strenuously urged by some authors, an operation of doubtful utility.

Dr. Randolph thought that the Wilde method was a faulty one and that a larger incision, under proper antiseptic precautions, did not increase the gravity of the operation, while it exposed the bone sufficiently to enable one to discover just what portion of it was involved. He had noticed frequent relapses after the Wilde incision.

Dr. Harlan said that there were only very meagre statistics on the subject to be had, but from those which he could find, and from his own observation and that of his acquaintances, it seemed that mastoiditis is rarely a fatal disease. Nature takes care of these cases in a wonderful way. An otorrhœa is an objectionable thing, but the number of people having it and still living out their years independently of it is very great. The inspissated masses which occur in neglected otorrhœas have been shown to contain very large quantities of streptococci, and in operating, one is likely to infect the wound that he makes by setting free these germs. If an operation is done at all it should be done very thoroughly. A case in point was a healthy, vigorous man of 40, who was treated for polypus in the ear. A large polypus was removed and a number of smaller ones were being scraped away. After this operation the man had a fainting spell at his place of business. Dr. Harlan was called to him the next day, and on the day following the man became completely unconscious, and had heavy, stertorous breathing. No tenderness over the mastoids.

He operated, gouging clear into the antrum, where he found a teaspoonful of pus. The man died six hours afterward.

As to Wilde's incision, it is hard to understand why it does so much good. As an illustration of its efficacy, Dr. Harlan mentioned a case in his practice of a young girl of three and a half years who was brought to him, having a profuse otorrhœa, with red and swollen ear. The child had not slept for two nights. Under chloroform Dr. Harlan made a free incision after the manner of Wilde. No pus was found. The child went to sleep shortly after the operation and the next day was bright and at play. By the following day the discharge had almost entirely ceased, and within four days had absolutely ceased.

Dr. Bernstein thought that if antiphlogistic measures were more thoroughly tried in cases of mastoid disease that the necessity for operation would be far less frequent.

Dr. Harry Friedenwald said that a great many cases of mastoid inflammation get well without surgical procedure, either of their own accord or by more or less vigorous antiphlogistic treatment. As to Wilde's incision, he did not think it was proper surgery to make a small incision and then wait for results. If it is necessary to cut down over the mastoid it is certainly necessary to try to find out, if possible, the cause of the swelling or pain. An incision of at least two inches in length should be made and the periosteum thoroughly pushed back. There is greater danger in these mastoid troubles than many surgeons believe. There is no anatomical reason why a mastoid abscess should always open externally. These abscesses are just as near to the brain as to the external surface. Dr. Friedenwald did not believe that the mastoid operation was dangerous when proper precautions were employed. Drills should never be used, and chiseling should never go beyond the depth of one-half inch. He has never regretted having operated early. He lost one case by late operation and another case died because brought in too late for operation.

Dr. Woods thought that inasmuch as many cases get well after Wilde's incision, there is no necessity, in the absence of any particularly dangerous symptoms, to do the radical mastoid operation at first. He believed that after Wilde's incision was made a thorough search should be made over the mastoid until the source of the trouble was found. Dr. Woods asked Dr. Friedenwald if he would have chiseled into the mastoid in the case of the little girl described by Dr. Harlan. He replied that he would. Dr. Woods did not think the operation would have been justified.

WILLIAM T. WATSON, *Secretary*.

1519 N. Broadway, Baltimore.

PHILADELPHIA ACADEMY OF SURGERY.

AMPUTATION AT HIP-JOINT—ENCYSTED CARTILAGINOUS TUMOR
NEAR SUBCLAVIAN VESSELS—OPERATION ON THE FIFTH
NERVE.

By JOHN B. DEEVER, M. D.

The meeting was held on March 6, 1893, the president, Dr. William Hunt, in the chair.

Mr. President and Fellows of the Academy—I will first present a case of amputation at the hip-joint, done for osteo-

myelitis of the femur. At the time of the operation the patient was very much depressed from sepsis, consequent upon prolonged suppuration. The only point of interest in the case from an operative point of view is that during the amputation hæmorrhage was controlled simply by an Esmarch tube applied round the thigh, above the trochanter and along the crease of the groin, being retained here by two pieces of bandage, one passed beneath the tube in front and the other beneath the tube behind, each of which was held by an assistant. An oval flap of skin and fascia was made, and the muscles divided down to the bone by a circular sweep of the knife. The superficial and deep femoral arteries, with their accompanying veins, were next tied separately, as well as those of the muscular branches which could be recognized. The tube was next loosened a little, and the small vessels, as they bled, caught with hæmostats. The tube was now removed, and an incision carried from the external angle of the wound up over the trochanter and into the joint dividing the capsular ligament, when the muscles were carefully separated from the bone and disarticulation completed. The amount of blood lost amounted to not more than two ounces.

The advantage this procedure offers over the Wyeth method is in not dividing the femur before the disarticulation is made, and further, that the amount of blood lost is not any greater, and that the vessels not being constricted for so long a time, there is less likelihood of consecutive bleeding. The tumor I here present is one of sarcoma, removed from the side of the neck, which had its origin from the periosteum of the vertebræ. The symptoms presented by the patient were those of laryngeal obstruction, paroxysmal in character and attended by the expectoration of large quantities of mucus. The symptoms of obstruction were not caused by pressure inflicted upon the larynx or trachea, but from involvement of the laryngeal nerves. Before the operation was performed I very much questioned if the removal of the growth would suffice to relieve the obstruction, which was afterward proven by the same symptoms continuing until death, twenty-four hours thereafter. The dissection was not a very difficult one, as the mass lay behind the large vessels, the pulsation of which was scarcely perceptible. The great amount of infiltration around the vessels must by necessity have involved the laryngeal nerves as well.

The second specimen is one of cyst, in the wall of which is a circular piece of cartilage. It was removed from the sub-clavian region of a man who was injured at the battle of Appo-

mattox, April 9, 1865. When the accident occurred he was standing under a tree. He was not able to say, definitely, whether the injury resulted from being struck by a piece of shell or by a piece of wood from the tree. The only noticeable trouble at the time of the accident was fracture of the clavicle. From that time to the present a sinus has existed in the neck which patient states has been operated on without success. He was referred to me by Dr. Hildenbrand, when, upon examination, the orifice of the sinus was plainly to be seen, immediately above the inner end of the left clavicle, from which was escaping a purulent discharge, and through which, upon the introduction of a probe, could be felt what was believed most probably to be dead bone. Examination with the fingers demonstrated the presence of a partly movable mass which was thought to be a detached piece of the clavicle which had undergone necrosis. Operation revealed the presence of this cyst; it was attached to the sheath of the subclavian vessels and to the pleura. Examination of the clavicle through the wound showed no trouble other than a slight enlargement at the seat of the original fracture. Examination of the cyst wall demonstrated very clearly the presence of cartilage.

T. M., aged 58 years, white, Irish, slate-roofer; from a child had been very nervous, the slightest excitement or undue exertion throwing him into paroxysms of nervousness. When 28 years of age, had an attack of smallpox which was followed by a weeping sore over the right inferior maxilla. This continued to discharge for six years, when it healed. Immediately after the healing of the sore he was attacked with neuralgic pains which were referred along the course of the inferior dental nerve. This pain continued at irregular intervals for six years, when he consulted a surgeon, who was supposed to have removed a section of the nerve near the dental foramen. Very little if any relief followed this operation, when a second was performed by the same surgeon one year later; this was followed by relief for one year, when he had another attack of the pain. He now came under my care. I trephined the inferior maxilla over the angle and removed a section of the inferior dental nerve. This was followed by relief for a period of fifteen months, when the pain again returned. I now opened up the field of the old operation, exposed the proximal end (stump) of the nerve, excised a part therefrom, chiseled away the roof of the remaining portion of the dental canal, and removed the distal portion of the nerve as far as the mental foramen. This was followed by relief for sixteen months, when the pain returned, being referred, in addition to along the course of the

inferior dental, along the side of the tongue. I now simply cleared out the field of the old operation, but this was not followed by any marked relief. I again operated, this time taking out a vertical section of the ramus of the jaw as far as the sigmoid cavity, and removed a further section from the proximal end of the inferior dental, and at the same time a section from the gustatory nerve. This was followed by relief. I purposely refrained from taking a section from the inferior maxillary nerve immediately after it passes through the foramen ovale, also from performing an intra-cranial operation, as I am not as yet, by any means, convinced that these more radical procedures are warrantable until the milder ones have been done without success. I can recall a number of cases, both of neuralgia of the inferior as well as of the superior maxillary nerve, where I have followed this course in relapsing attacks, with satisfactory results, to convince me that a longer period of relief from pain is offered the patient than would result, perhaps, by the more radical operations, removal of the Gasserian ganglion, etc., in the light of the present statistics.

DISCUSSION.

Dr. John B. Roberts: Twice I have had occasion to remove large malignant growths from the neck, and in both cases the result was the same as in Dr. Deaver's case. In one case, a child, I had to tie the internal carotid artery, and the child died on the second day with symptoms of brain implication. The other case was that of a man with a deep tumor requiring ligation, either of the internal jugular vein or of a large branch close up to the vein, I now forget which. I thought that he was going to get well, but he died on the fourth or fifth day with symptoms, the origin of which I could not determine. The wound was aseptic and nearly healed. He was found to be breathing very rapidly, and sank in a few hours in a sort of collapse. I could not tell whether there was implication of deeper organs or heart clot. No autopsy could be obtained.

Dr. J. Ewing Mears: In the case which I reported, and to which reference has been made by Dr. Deaver, I removed two and one-half inches of nerve and submitted it to Dr. Deschweinitz for examination, and the condition found was that of fatty degeneration. It is important, it seems to me, that our studies should be directed toward ascertaining, if possible, what the pathological condition is in these cases of trifacial neuralgia. I think that all of us have come to the conclusion that operative procedures appear in most cases to be hopeless so far as permanent relief is concerned. It is not impossible that from studies in regard to the cause of the condition we may

be able to indicate some method of operation which may prove more successful.

Last spring the members of the American Surgical Association were shown in the Massachusetts General Hospital the results in five or six cases of operations upon the second and third divisions of the fifth nerve for neuralgia. In these cases an incision had been made over the temporal region, the muscle cut through and the zygoma divided. By pressing the tissues down firmly the operator was able to reach the second and third divisions as they emerge from the foramen rotundum and ovale. In these cases the relief had extended, if I remember correctly, over three or four years, and in one case five or six years. From the reports which are given in Boston, this appears to be a very successful operation.

To my mind the question of interest is in regard to the pathological condition. If the disease is of central origin I do not see how any operation on the peripheral terminations of the nerves can be of service. Repeated operations, such as Dr. Deaver performed, of course, give temporary relief.

Dr. W. W. Keen: I quite agree with Dr. Mears that the question of the pathology is a most important one. In the cases where I have had a microscopical examination made the change has been found to be one of sclerosis. In one case there were spots of distinct hæmorrhage into the nerve. These were almost macroscopic. I have never seen the inferior dental nerve so large as in this case. That patient had a return of the pain, and a second operation was done. So far as I could determine, a new nerve had formed, and, strange to say, there was a branch of this nerve which went inward through a foramen on the inner surface of the jaw. I saw no such foramen at the first operation. Dr. Dana some time ago published a paper in which he stated that he had found sclerosis of the vessels rather than of the nerve. However this may be, it seems to me clear that the sclerosis of the vessels or of the nerve is the chief thing, and that this is distinctly a senile change. That it does not appear in early life we all know, but only in later life, when sclerosis of other organs appear. This being the case, I think that the operation of choice should always be the peripheral operation. I should not think of endeavoring to remove or break up the Gasserian ganglion as a primary operation. I was told the other day that one of Mr. Rose's cases had shown symptoms of return, and this is what might be expected, as the sclerosis begins rather in the periphery and works backward. While medicine offers no benefit in the majority of cases, we can, as a rule, assure the patient that an operation will afford at least

one or two years of relief. I presume that some of Dr. Deaver's operations consisted simply in reaming out the connective-tissue about the stump of the nerve. This I have done in more than one case, and, although under the microscope no nervous tissue could be found in the material removed, the operation gave as much relief as followed a pure exsection of the nerve. This being the case, it seems to me that we should, as a general rule, endeavor to give relief by such a simple operation, rather than immediately to go to the foramen rotundum or ovale or within the skull and remove the Gasserian ganglion.

I noticed that Dr. Deaver referred to destruction of the ganglion as not a serious operation. I should consider it quite a serious operation, although there have not been a large number of deaths. Rose has done it six or seven times, with one or two deaths. Andrews four times, without a death. Hartley once, with recovery, and Dr. Roberts once, with recovery. Besides this, two eyes, and possibly more, have been destroyed. It seems to me that any operation involving so much traumatism is to be considered a very serious operation, and should not be undertaken except after the gravest consideration.

Dr. James M. Barton: As has been said by Dr. Mears, we have not yet arrived at the pathology of neuralgia. One suggestion is, that it is due to small aneurisms, which have been found in the diseased nerves. This view is supported by the results of the ligation of the external carotid for this affection. Nussbaum claimed that one-half of the cases are permanently cured.

I can also confirm what has been said by Dr. Keen. The most trifling operation on the nerve, the slightest stretching, even the division of the distal branches is apt to afford temporary relief, and the most serious operation will not do much more.

So rare, in my experience, is anything like permanent relief, that I exhibited before this society, a few months ago, as something unusual, a case of neuralgia of the second branch, of thirteen years' duration, in which I removed the nerve at the foramen rotundum, and where the relief has continued for five years. The man is still free from the disease.

Dr. Thomas G. Morton: I am at present attending a patient who is now eighty-two years of age, on whom I operated some twenty years ago. After the excision he had entire relief for many years; then had a recurrence of pain, brought on apparently by a ride of five miles in a wagon which had no springs, in which he was severely jolted.

For the last ten or fifteen years, although enjoying, indeed, robust health, he has at times suffered intensely, and then,

again, having entire immunity from pain. Now the suffering is only relieved by morphine injections. Swallowing, talking, any movement of the tongue, touching the skin of the face, or even the beard, provokes "thrusts of pain."

In another case—now more than twenty years since the operation, the patient has had entire freedom from pain. As a rule, sooner or later pain reappears; but in such cases there is no reason why the operation should not be repeated. Benefit is generally experienced from each operation, and for even a measure of relief patients are willing to submit to any treatment.

REPORT OF A CASE OF FRACTURE OF THE THYROID CARTILAGE.

By WILLIAM J. TAYLOR, M. D.—Surgeon to St. Agnes' Hospital; Assistant Surgeon to the Orthopædic Hospital and Infirmary for Nervous Diseases, Philadelphia.

Charles E., aged 43 years, a carpenter, was admitted to the surgical ward of St. Agnes' Hospital on October 6, 1892, in a semi-conscious condition. He was unable to give an account of the accident, but a fellow workman reported that he had fallen a distance of about twenty feet, from a scaffold upon which he had been working. No one saw him fall, but when he was discovered he was unconscious, and lying across a heavy piece of wood. When admitted into the hospital, a short time afterward, he was unconscious, could be roused from his stupor, but could give no account of himself. He was very much shocked. The right side of his face was badly contused, the right eye swollen and completely closed. He was bleeding from the nose, mouth, and left ear, and his general appearance was that of a man suffering from a fracture of the base of the skull. The pupils were equal, and a very careful examination showed this diagnosis to be an error. He had great difficulty in breathing, could not swallow, the saliva ran out of the corners of his mouth, and when he attempted to speak his voice was husky and his articulation very indistinct; he could not speak above a whisper, and only that with the greatest pain and difficulty. There was little or no swelling of the neck, but when he regained complete consciousness he complained of great pain and discomfort in the throat.

A careful examination now revealed a fracture of the thyroid cartilage on the right side, extending from above downward about on a line with the insertion of the thyro-hyoid muscle and about two lines anterior to it. The amount of displacement was very slight, but the mobility of the fragments could be easily demonstrated, and the fragments displaced and replaced again by manipulation with the fingers.

Dr. Smock, the laryngologist to the hospital, very kindly examined him very shortly after his admission, and confirmed the diagnosis of fracture of the thyroid cartilage. He reported also a rupture of the tympanic membrane about at the extremity of the manubrium process of the malleus. The nose showed hemorrhagic points on the septum on both sides.

Dyspnœa was pronounced, but there was apparently no emphysema about the seat of the fracture or in the neck. His symptoms were severe, and the pain and discomfort very great, but I did not think them sufficiently so to demand immediate relief.

Dr. White, the resident surgeon, was instructed to make all preparations for instant tracheotomy, and to send for me if the symptoms should increase in severity. He was to use his own judgment, however, and to operate at once without waiting for me to arrive should the necessity arise. No attempt whatever was made to apply a dressing. For some days the bleeding from the mouth persisted, and the difficulty in swallowing and dyspnœa continued, but gradually lessened, and by the end of three weeks was entirely gone. His voice still remained somewhat husky, but there was no longer pain or difficulty in swallowing. The left ear was treated by cleaning out the auditory canal with cotton, and insufflating daily aristol and boric acid.

MULTIPLE FRACTURE OF BOTH UPPER EXTREMITIES.

By WILLIAM J. TAYLOR, M. D., Surgeon to St. Agnes' Hospital; Assistant to the Orthopædic Hospital and Infirmary for Nervous Diseases, Philadelphia.

Margaret C., aged 56 years, a widow, and by occupation a monthly nurse, was admitted to my ward at St. Agnes' Hospital on the evening of October 19, 1892, suffering from the most remarkable number of fractures, considering the amount of constitutional disturbance, it has ever been my fortune to see. She was going down the cellar stairway in the dark when she missed her footing and fell to the bottom, some eight or ten steps. From the nature of the injuries she must have put out her hands before her in the hope of breaking the fall.

She was unconscious for a short time, and was then brought to the hospital in a patrol wagon, but recovered sufficiently to walk from the wagon into the receiving ward.

Upon examination it was found that she had received a lacerated wound of the scalp, six inches long and extending down to the bone, and a deep lacerated wound of the lower lip about two inches in length. There was a fracture of the surgical neck of the left humerus and an oblique fracture of the middle one-third of its shaft; a contusion of the left elbow and

a fracture of the lower end of both the radius and ulna of the same side. There was a supra-condyloid fracture of the right humerus extending into the elbow-joint, forming a T. A fracture of the upper third of the radius and of the ulna, and a fracture of the lower end of the radius. In spite of this great number of fractures and of the serious lacerated wounds she was able to walk into the hospital, and seemed to suffer comparatively little pain. Her temperature was normal, her pulse good, and there was no evidence of shock such as would have been expected from the nature of her injuries.

There was much difficulty experienced in adjusting and holding in place the different fractures, but with care and patience and plenty of plaster-of-Paris this was accomplished. Her recovery has been most satisfactory, and she has for all practical purposes full use of both arms.

Such an extensive number of fractures led me to suppose there must have been some serious lesion of the bones, but the most careful inquiries failed to give me any clue to such a state of affairs. She was a large, strong, and, apparently, perfectly healthy woman. She had never before had a fracture of a single bone, neither was there any history of fracture in any member of her family. She was born in Ireland, and had lived there until a few years ago, and had always been in good health and a hard worker.

DISCUSSION.

Dr. H. R. Wharton: Some years ago the president investigated the subject of fracture of the larynx and proved that tracheotomy was indicated, and that patients usually did better after this operation.

I would ask the experience of members in regard to multiple fractures, whether they have found much constitutional disturbance or many cases of sudden death following multiple fracture. My own experience has been that generally patients do well. Last summer I had under treatment a boy 6 years old, who had fallen off of one of the tunnels of the B. & O. R. R., and sustained a compound fracture of the nose, fracture of both bones of each forearm, and fracture of both thighs about the middle of the shaft. The patient did perfectly well with normal temperature for a week. He was doing well when I saw him at 12 o'clock. In the evening of the same day the resident noticed that his breathing was peculiar, and an hour afterward the patient was moribund. He died of some cerebral complication. I thought that it might be a case of fat embolism which is said to follow fractures. I have seen another patient die very much in the same way with

a simple fracture of the femur. No post-mortem was made in either case.

The President: The conclusion of the paper which I wrote on fracture of the thyroid cartilage was that where emphysema and bloody sputa were present there had been up to that time no recovery where tracheotomy had not been performed. I thought that tracheotomy should be done when the first symptoms were discovered. I found several cases similar to that reported by Dr. Taylor, in which recovery followed without tracheotomy.

Dr. Thomas G. Morton: Some years ago I saw in consultation a lady, eighty-four years of age, who had gradually, during ten years, lost her vision from cataracts. Soon after this she sustained in a fall a fracture of both bones of the forearm the humerus about the middle and the shaft of the femur near the great trochanter. Complete recovery from these injuries following showed such an excellent repair that six months afterward I operated upon both eyes at the same sitting. Perfect vision followed in each, which continued until her death when in her ninety-seventh year.

A METHOD OF OPERATING ABOUT THE FACE BY WHICH BUT LITTLE BLOOD ENTERS THE MOUTH.

By W. W. KEEN, M. D.

I wish to call attention to a method of operating about the face which is not generally followed, and which may be new to some. It is particularly applicable to epithelioma about the lip, of which I have had two severe cases in a comparatively short time. In one there was extensive epithelioma, requiring removal of a portion of the upper lip, the lower lip, and the cheek. The other case was one of epithelioma of the cheek, and is also of interest from the fact that the patient had originally been operated on forty years ago by Dr. George R. Morehouse. A microscopic examination was made at that time, and the tumor was said not to be epithelioma. When I saw the man the disease extended from the angle of the mouth back to the molar teeth, and from one jaw to the other. It was on the inside of the mouth exclusively, except at the angle, where the entire thickness was involved. The external layer of the cheek seemed to be entirely free. In operating I placed the patient on a flat table with the operated side turned a little down and cut through the skin down to the mucous membrane, but not through the latter. I then secured all the vessels *before* opening into the mouth. In this way I prevented blood from entering the mouth and also lessened the total loss of blood. In this case Stenson's duct was involved in the operation. I

found the duct and stitched it to the mucous membrane of the upper jaw, and there has not been the slightest trouble from fistula. The incision was a very wide V, the linear incision corresponding to the apex of the V being on the cheek, and the widest part is the base of the V inside the mouth. I am sure that those of you who try this method will find it satisfactory.

THE PAN-AMERICAN MEDICAL CONGRESS.

The Section in Marine Hygiene and Quarantine has been organized as follows: Honorary presidents—Dr. Lino Alarco, Lima, Peru; Dr. Henry B. Baker, Lansing, Mich.; Dr. Cardenas, Managua, Nicaragua; Dr. J. J. Cornilliac, St. Pierre, Martinique, F. W. I.; Dr. Felix Formento, New Orleans; Dr. H. B. Horlbeck, Charleston; Lieutenant Colonel Amalio Lorenz, sub-inspector of second class, Spanish Navy, Havana; Dr. F. Montizambert, Quebec, Canada; Dr. Francisco Nuñez, St. Tecla, Salvador; Dr. Juan Ortego, Guatemala, Guatemala; Dr. Joseph Y. Porter, Jacksonville, Fla.; Dr. John Pringle, Kingston, Jamaica; Dr. Juan J. Unoa, San José, Costa Rica; Dr. J. Mills Brown, surgeon general United States Navy. Executive President—Dr. Walter Wyman, surgeon general, United States Marine Hospital Service, Washington. Secretaries—Dr. S. T. Armstrong (English speaking), 166 West Fifty-fourth street, New York; Dr. G. M. Guitéras (Spanish speaking), United States Marine Hospital Service, Washington. Advisory Council—Dr. H. M. Biggs, New York City; Dr. John C. Boyd, United States Navy; Dr. H. H. Carter, Norfolk, Va.; Dr. W. M. L. Coplin, Philadelphia; Dr. A. G. Clopton, Galveston, Texas; Dr. C. G. Currier, New York; Dr. S. Durgin, Boston; Dr. Seneca Egbert, Philadelphia; Dr. George Homan, St. Louis; Dr. W. T. Jenkins, New York; Dr. J. F. McShane, Baltimore; Dr. G. H. F. Nuttall, Baltimore; Dr. S. R. Olliphant, New Orleans; Dr. Dabney Scales, Mobile; Dr. R. M. Swearingen, Austin, Texas.

The executive president desires to call the attention of all members of the medical profession that are interested in the topics pertaining to this section to the regulation of the congress, that contributors are required to forward, not later than July 1, to the secretary of the section, abstracts, not to exceed 600 words each, of the papers they propose to present before the section.

The topics that will be considered by this section are as follows: 1. The hygiene of vessels, commercial or naval, in-

cluding the questions of ventilation, heating, sanitary arrangements, the disposal of cargo so as to facilitate disinfection, food supply, etc. 2. The medical officers of passenger vessels; methods for their selection, duties, etc. 3. The vital statistics of seamen and firemen. The question of the medical examination of crews preparatory to shipping. 4. The supervision of vessels by government medical inspectors at ports of arrival and of departure. Code of rules for handling an epidemic disease that breaks out on shipboard. Disinfection of passengers and crew during a voyage. Location and arrangement of ships' hospitals. 5. Epidemic and exotic diseases propagated by shipping. What diseases should be quarantined. Responsibility of nations for epidemics; India for cholera, South America for yellow fever. Can a feasible plan be devised to totally exterminate cholera? International intervention to prevent the propagation of cholera and other epidemic diseases by pilgrimages or immigration. 6. International uniformity in quarantine regulations. Should quarantine officers be notaries public? 7. Arrangement of detail and equipment of quarantine stations: *a*, inspection stations; *b*, local quarantine stations; *c*, refuge stations. Methods for handling infected or suspected vessels. Interstate and inland quarantine; sanitary cordons; camps of refuge; camps of probation. Recent improvements in hospitals for infectious diseases. Railroad inspection and quarantine. Length of time vessels should be held in quarantine. Conditions that should determine proclamation of quarantine against a country. Under what requirements may passenger traffic be carried on between a port infected with yellow fever and a Southern port of the United States during the summer with the least obstruction to such traffic? What merchandise should be considered as requiring treatment if shipped from a port or place infected with cholera, yellow fever or small-pox? 8. Methods of disinfection: *a*, persons; *b*, baggage, *c*, cargoes; *d*, vessels. Recent improvements in quarantine appliances; steam chambers; sulphur furnaces. Liquid sulphur dioxide as a disinfectant. Treatment of ballast: water; solid. What time should an infected vessel be detained in quarantine? *a*, for cholera; *b*, for small-pox; *c*, for typhus fever; *d*, for plague; *e*, for yellow fever. Methods of disposal of the bodies of those that die while in quarantine.

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COLLABORATORS:

DR. F. W. PARHAM.

DR. H. W. BLANC.

DR. A. W. De ROALDES,

DR. R. MATAS.

Editorial Articles.

ASEXUALIZATION AS A PENALTY FOR CRIME.

Under the above title, Dr. Orpheus Everts, of Cincinnati, Ohio, publishes a pamphlet that should receive attention from medical journals until the profession and the lay press is made thoroughly aware of the value of the mode of punishment advocated by the author. Dr. Everts first published his article in February, 1888, in the Cincinnati *Lancet Clinic*. The subject is thus not entirely new, but it has been only sniffed at by the medical press, or else laughed at as a pretty fair joke. Dr. Wm. M. Hammond expressed himself, several month ago, as in favor of preventing the propagation of criminals by means of castration.

Dr. Everts very boldly advocates asexualization as a means of lessening the numbers of the criminal classes. He says: "Surgical asexualization of all criminals convicted of offences that, circumstantially considered, indicate constitutional depravities that are recognized as transmissible by heredity, is not only practicable, but expedient for the protection of society against the ever-impending danger of invasion by the

‘savages of civilization,’ known as the vicious, criminal or defective classes—and would, properly enforced by law, eventuate in an effectual diminution of crime and reformation of criminals.’

Dr. Everts bases his arguments on the following facts:

(a) Among all undeveloped peoples punishment for offences, criminal or otherwise, is retaliatory, vindictive and cruel; the primary purpose being to gratify revengeful feelings by the infliction of pain upon the offender; and, secondarily, to terrify others by the exhibition of cruelty and power. Further on in the history of human progress ideas of compensatory justice appear, and an eye for an eye and a tooth for a tooth is demanded; or certain equivalents, not in kind, are made acceptable, as punitive, for misdemeanors affecting rights of property, etc., etc., or for minor offences affecting the rights of persons.

(b) But, step by step with the evolution of morals, characteristic of, and inevitably concomitant with, higher reaches of human development, especially appreciable within the last two or three centuries, the disposition to punish criminals by way of retaliation—blood for blood, blow for blow, and burning for burning—has been undergoing a well-marked modification. The tendency has been, and is, in all civilized States called Christian—not toleration of crime or forgiveness of criminals, but a more charitable, because a more intelligent, consideration of the relation of criminal conduct to antecedent and concomitant conditions affecting the lives and characters of the guilty, and a recognition of duties imposed upon society, growing out of such relations.

In the present stage of civilization we should not ask what kind or degree of torture will appease the anger of an offended community, but what should be done to criminals to protect society, diminish crime and improve the morals of the criminals? For petty offences, the present penal regulations are sufficient; but a large class of crimes, outside of those relating to sexual crimes, could best be punished by asexualization, whether of male or female criminals.

Speaking broadly, Dr. Everts urges that criminals that manifest tendencies that are transmissible by heredity should be deprived of the power of transmitting anything by being relieved of their testicles or ovaries. This deprivation would be unpleasant to the individuals affected, but it would not interfere

with their usefulness as beasts of burden; they would still have the power to make themselves useful members of society, but their power and inclination for evil would be largely curtailed. The only fault to be found in Dr. Evert's paper is the failure to furnish even an incomplete list of the crimes which, in his estimation, should be punished with asexualization.

If legislators are to be called upon to enact laws for the punishment of crime by means of asexualization, they will want to specify very clearly the crimes for which the punishment is provided.

That, however, is a matter of detail; the subject is still in a state of desultory discussion. It is necessary to educate the profession and the laity up to the necessity of legalizing asexualization, and then when the demand for it has become strong, the public wisdom will determine the extent and limitations of this form of punishment.

Abstracts, Extracts and Annotations.

MEDICINE.

THE TREATMENT OF ASIATIC CHOLERA.

BASED ON OBSERVATIONS MADE AT SWINBURNE ISLAND,
DURING SEPTEMBER AND OCTOBER, 1892.

By FRANK ABBOTTS, Jr., M. D., Deputy Health Officer and Assistant Bacteriologist to the Health Officer of the Port of New York; Instructor in Bacteriology in the Lomis Laboratory, University Medical College; Director of the Laboratory of Histology and Pathology New York College of Dentistry; Curator and Pathologist New York Infant Asylum, etc.

The rational treatment of Asiatic cholera is derived from our actual knowledge of the disease; being as it is a localized, infective process, our efforts should be directed to destroying the vitality of the bacteria, if possible, in their place of localization, and to neutralizing the effect of the absorption of the poisonous substances created in the intestinal tract by the comma bacilli which produce the disease. The first indication is filled by flooding the intestines with solutions of substances capable of stopping the growth or destroying the life of the

pathogenic bacteria of the disease. Acid solutions, as is well known by all experimenters, have a more or less germicidal action upon the comma bacilli. Abundant rectal injections, or enteroclysis, as Cantani has called it, can not only cleanse the different portions of the large intestine, but actually pass through the valve of Bauhin into the small intestine, reaching in some instances the stomach, as can be proved by chemical analysis of the contents of that organ after enteroclysis. It happens in some cases, although the solution penetrates and fills the large intestine, the last portion of the ileum is so flexed upon the cæcum that the injection will not pass into the small intestine, but a careful and well-directed massage of the right iliac fossa will soon overcome the obstruction. This has in many instances been put forward as an objection to the practice of enteroclysis, but it has been demonstrated clinically that the ileo-cæcal valve is readily permeable. A 2 per cent. solution of tannic acid stops the growth of the comma bacilli and destroys its vitality in from one to three hours. Enteroclysms of this solution, one-half gallon at a time at 40 deg. C., according to Cantani, 42 deg. C., according to Byron (104 to 106 deg. F.), not only act as an intestinal disinfectant, but by their temperature counteract the tendency to collapse, which is one of the characteristics of this disease. The intestinal injections should be begun in all cases, without exception, as soon as the first diarrhœic symptoms appear. Any case of diarrhœa in a cholera-infected locality should be considered as suspicious and treated accordingly. The solution of tannic acid is prepared by dissolving two ounces of tannin in one gallon of sterilized water, then the solution is heated to the proper degree of warmth as above given and injected into the colon by means of a flexible catheter not less than two feet in length. The pressure should be regulated with a fountain syringe at the height of about four or five feet. In some instances the injection does not seem to penetrate into the colon, but by allowing the solution to first fill the rectum and advancing the catheter gradually, as the intestines fill, the operation is performed without difficulty. The volume of the injection should be measured by the age and size of the patient; for children of two years of age, about a pint of the solution, injected every two hours, or more frequently, according to the indications of each case, is sufficient; while in the adult the dose may vary from one quart to one gallon, repeated as often as symptoms demand. In some instances, when vomiting has not begun, calomel in doses of ten grains, repeated every hour until thirty grains have been

taken, may prove of great advantage, not as a specific but for its action as a detenser of the intestines.

In cases where the stomach rebels against any medication it is useless to lose time trying to treat the disease by the administration of medicaments *per orem*. Another fact that should not be forgotten, whether the case is slight or grave, is the disinfection of the external integuments; all patients should be thoroughly washed in an immersion hot bath and their skin cleansed with slightly acid solutions. They should be put in a warm bed, and stimulants, such as hot coffee or hot tea with brandy, administered. In many instances this treatment will check the progress of the disease, as has been proven in cases in which the comma bacillus has been found in the dejections of patients who never reached the stage of collapse, or the second stage of the disease. When the diarrhœa is profuse and persistent, and the first signs of collapse appear, hypodermic injections of alkaline solutions should be resorted to without a moment's delay. These not only replace the water lost from the blood, but by increasing the volume of fluid contained in the body help to dilute and eliminate the ptomaines produced by the comma bacilli, which otherwise would be retained in the system. The solution for hypodermic injections, or hypodermoclysis as it is generally known, is prepared by dissolving seven parts of sodium chloride in one thousand parts of sterilized water (sodium chloride 3 ij, water 3 xxxij) with or without the addition, according to the necessity of the case for a stimulant, of ten parts of brandy or six parts of pure alcohol, and heating the whole to 37 deg. C. (98.4 deg. F.). The operation is performed by means of an ordinary bulb or fountain syringe, and a small-calibre aspirating needle inserted, preferably, in the latero-thoracic region. The amount injected each time varies according to the case. In an adult a quart is not an excessive amount, and this may be repeated as often as required until the pulse, which should be the guide to the physician in these cases, becomes strong and full. In most cases the absorption of the injected fluid indicates the prognosis. A quart of fluid is generally absorbed by an adult in about thirty minutes. If the absorption does not take place the probability is that the vitality of the patient is so low that all interference is useless. Hypodermoclysis and enteroclysis must be continued until the temperature of the body and the action of the heart show an improvement in the case. Hot-air baths are most beneficial to maintain the temperature of the body. If the symptoms of asphyxia are persistent, notwithstanding the above treatment, inhalations of oxygen under certain circumstances have been of great benefit in cases which

seemed almost hopeless. Cramps, which are the most distressing symptom during the attack in its advanced stages, are relieved by the combined action of the hot-air baths and massage.

Opium and all its derivatives, as well as hydrate of chloral, bromides, etc., should be avoided, as the only result of the use of such therapeutic agents is to depress the action of the heart and the vitality of the patient. From our actual knowledge of the disease, which if only the localization of a pathogenic germ in the intestinal tract, with subsequent absorption of a poison which produces an action very similar to that of muscarine, the treatment is evident, and it will be found that that given above is the best known to science to-day. The contagion having taken place, the germ being in the intestinal tract, the ptomaines having been absorbed into the blood, our effort should be to remove the poison from the blood, and to put a stop to the activity of the germ in the intestinal tract—in other words, wash out the blood, wash out the intestines.

During the third or reactionary stage, which differs according to the severity of the attack, the nutrition of the patient should be the principal aim of the physician; to re-establish the impaired action of the kidneys and build up the system gradually, a careful diet should be given, avoiding everything that requires much effort in the way of digestion, thus protecting the alimentary tract from irritation. Seltzer-water with milk, carbonated beverages, champagne in moderate doses, maltine with cod liver oil in weak children, maltine with peptones in older persons, will be found beneficial. The latter is the best substitute for a combined meat and cereal diet, and is easily assimilated.

The convalescence after cholera is long and tedious, and fraught with danger to the patient on account of the lesions left in the intestinal tracts. Notwithstanding the apparent good condition of the patients after leaving their beds they are very debilitated, and the least excess or error in diet may give rise to serious complications. Duodenal digestion is always very poor in these cases, and foods which require little digestion in the small intestine should be adhered to for some time, and here maltine preparations have proved exceedingly useful. As to the prophylactic treatment, only brief mention is necessary. Isolation of the patients and thorough disinfection of their clothes and dejections are the best means of avoiding the disease. It should not be overlooked that water for drinking purposes, and all foods, should be recently boiled or cooked before being used, and it is highly important that the physician sees that in his families these precautions are observed. All cases

of indigestion should be promptly treated, the system of delicate persons built up as far as possible, and any errors of diet corrected. Delicate children with poor digestion and weak assimilative powers derive great benefit and are rapidly built up by the free use of maltine with cod-liver oil.

The results of the above treatment were practically demonstrated in the last imported epidemic of Asiatic cholera at the quarantine station. In most of the steamers which brought the cholera patients over the death rate on board reached over 90 per cent. of the total number of sick, while at Swinburne Island the percentage of death was reduced to 20 per cent., and it is believed that treatment carried out as above, with careful attention to detail, and begun early enough in the disease, may reduce the mortality still lower.—*New York Medical Record*.

SURGERY.

CARCINOMA OF THE MAMMA.

Dr. Stiles during three years has examined more than one hundred mammary carcinomata. A portion of his conclusions are given below.

1. The cancer in about 90 per cent. of the cases assumed the form of a single, non-encapsulated, clearly defined, but microscopically infiltrating tumor.

2. The histological structure was essentially the same in all, consisting of clusters of modified epithelial cells in the lymph spaces and lymphatic vessels of a vascular connective-tissue stroma.

3. These modified epithelial cells differed from the normal epithelial cell of the gland in the following respects:

The nucleus was two to three times as large. The chromatine was relatively less in amount. The nuclear membrane was very distinct. Cells undergoing mitosis were abundant. Multinucleated cells and cells with fragmental nuclei were common, especially in rapidly-growing tumors.

4. The stroma of the tumor consisted partly of the pre-existing tissue. In the meshes of the stroma were leucocytes more or less numerous.

5. The cancer cells lay loose in the tissue spaces of the

stroma and were therefore liable to be washed into the lymphatics by the lymph stream.

6. The secondary cancerous foci were due to lymphatic dissemination of the cancer cells derived more or less directly from the primary tumor.

7. By the "nitric acid method" he had shown that the gland parenchyma extended much further in all directions than was generally supposed, and that the surgeon frequently fell short of his intention to remove the entire breast.—*H. J. Stiles in Brit. Med. Journal.*

State News and Medical Items.

Dr. M. C. Melançon, formerly of Shreveport, La., has located at Lake Charles, La.

Dr. G. R. Price has moved from Wellington, Miss., to McComb City, Miss.

Dr. D. H. Billiu, of Shreveport, who has been in New York several weeks nursing his son Dr. Morgan Billiu, who has been ill, has returned home. Dr. Morgan Billiu is one of the staff of the German Hospital.

Dr. T. T. Shipp has moved from Collins, La., to Doss.

The graduating class of the Medical Department of Tulane this year numbered 93; Memphis Hospital Medical College, 90; Medical College of Alabama, 33; University of Tennessee, 114; University of Nashville and Vanderbilt University, 150; Medical College of Virginia, 25; Chattanooga Medical College, 30; University of Louisville, 189.

Dr. A. Feltus Barrow, of Bayou Sara, was in the city recently.

Dr. J. M. Quin, of Zachary, La., was married recently to Miss Adella Odom.

Dr. James W. Fair, who died April 7 at Mansfield, La., had practised there forty-four years.

The death rate at Chicago the past year was 18.23 per 1000. This is lower than that of any other city in America or Europe with as large a population.

According to Dr. O. H. Rogers, of New York, who has given the subject much study, a person afflicted with syphilis loses seven years of his life.

The Georgia Medical Association, at its last annual meeting, admitted its first woman member. Her election was unanimous.

Dr. Marion L. Graves, of Waco, Texas, and Miss Laura Vashti Ghent, daughter of Dr. H. C. Ghent, of Belton, Texas, were married at the home of the bride, in Belton, March 21, 1893.

How is this for an epitaph, which is said to be on a tombstone in a cemetery of Lincolnshire, England:

“ Here lies the body of Johnny dear,
Snatched away by the diarrhœa.”

Dr. D. S. Perkins and wife, of Sulphur City, La., were entertained by Dr. A. J. Perkins on their visit to Lake Charles, and a reception was given in their honor.

The Alabama State Medical Examining Board rejects 41.16 per cent. of candidates who apply for a license.

At the 26th annual session of the Mississippi State Medical Association, held at Jackson, April 19-21, the following officers were elected for the present year:

President, Dr. E. L. McGehee, of Woodville; first vice president, Dr. Henry Izard, Meridian; second vice president, Dr. P. W. Rowland, Coffeeville; recording secretary, Dr. H. H. Haralson, Forest; assistant secretary, Dr. W. R. Harper, Rolling Fork; corresponding secretary, Dr. W. B. Smythe, Kosciusko; treasurer, Dr. John F. Hunter, Jackson.

Dr. Jas. I. Richards, of New Orleans, was married at Lake Providence, La., April 17, to Miss Carrie M. Graves.

Dr. W. L. Patten, formerly of Pensacola, Fla., has moved to Milltown, Ga.

A statue of J. Marion Sims has been placed in Central Park, New York, the only one ever erected in America.

The American Medical Editors' Association will hold its eleventh annual meeting June 5, 1893, in Milwaukee, Wis. Dr. Ernest Hart, editor of the *British Medical Journal*, will deliver the annual address, which will be followed by other addresses. A banquet will follow the business session.

The Texas Medical College at Galveston, the Medical Department of the State University, has done away with its fees, charging for a three years' course the nominal sum of \$30 matriculation fee.

Of the 78 applicants who presented themselves before the Mississippi State Board of Health for examination in Jackson, Miss., on April 4, 38 passed and 40 rejected.

Dr. John Carter, of New Orleans, died April 4, at his residence, corner Camp and Second streets. He was one of the oldest physicians in the city.

Dr. Jno. B. C. Gazzo was born at Montreal, Can., 1817, and died at Thibodaux, La., 1893. He was a member of several medical societies, of which we shall mention: Louisiana State Medical Association, American National Medical Association, Howard Relief Association, American Public Health Association, and a fellow of the Academy of Sciences of Philadelphia.

A lady in distress wrote the following urgent note to her physician: "Dear Dr.—Please come at once and bring your urethra with you." He took a catheter.

The Florida State Medical Association at its annual meeting in Jacksonville elected the following officers: President, Dr. F. H. Caldwell, of Sanford; first vice president, Dr. J. A. Wakefield, of Jacksonville; second vice president, Dr. R. P. Izler of Ocala.

Dr. C. D. Owen, ex-president of the Louisiana State Medical Society, has removed from Eola to LeCompte, La.

At a meeting of the Joint Committee of the Chicago Medical Profession on World's Fair Entertainment, held at the Sherman House, November, 1892, the establishment of a Bureau of Information and Service was delegated with ap-

proval and endorsement to Chas. Truax, Greene & Co., the committee reserving to itself the duty of such social entertainment of visiting physicians during the continuance of the Exposition as may seem desirable. This action was confirmed at the final meeting of the Joint Committee, February 25, 1893, and on application of the Practitioner's Club and the South Side Medical Club, the matter of social entertainment was delegated to them, with full authority to act in the capacity of entertaining bodies. with the retention of the chairman and its American and Foreign secretaries already appointed. Chairman, Dr. Chas. Warrington Earle; American secretaries, Dr. Archibald Church, Dr. Geo. Henry Cleveland, Dr. John C. Cook, Dr. J. C. Culbertson; British, Dr. Sanger Brown; German, Dr. F. C. Hotz; French, Dr. Fernand Henrotin; Spanish, Dr. E. J. Gardiner; Italian, Dr. A. Lagario; Swedish, Dr. K. Sandberg; Canadian, Dr. R. D. McArthur. The scope and duties of the above secretaries will be designated in the future.

C. WARRINGTON EARLE,
Chairman.

DIED.

JONES—At 10:30 o'clock Thursday morning, March 2, 1893, at the age of 25 years and 6 months, Minna Bayne, wife of Dr. Stanhope Jones and daughter of the late Thos. L. Bayne.

GOUAUX—Mrs. Angela Gouaux, born Granzini, aged 40 years, on April 1, 1893.

MORTUARY REPORT OF NEW ORLEANS.

FOR MARCH, 1893.

CAUSE.	White	Colored...	Male.....	Female....	Adults ...	Children.	Total
Fever, Yellow							
“ Malarial (unclassified)....	3	3	4	2	2	4	6
“ Intermittent							
“ Remittent							
“ Congestive.....	6	2	3	5	4	4	8
“ Typho							
“ Typhoid or Enteric.....	2	3	4	1	4	1	5
“ Puerperal	2	1	3		3		3
Influenza.....	3	2	4	1	5		5
Scarlatina							
Measles							
Diphtheria	6	2	6	2		8	8
Whooping Cough	1		1			1	1
Meningitis	10	4	8	6	3	11	14
Pneumonia.....	16	27	23	20	26	17	43
Bronchitis	7	8	10	5	3	12	15
Consumption	32	29	35	26	60	1	61
Cancer	11	4	4	11	15		15
Congestion of Brain.....	1		1			1	1
Bright's Disease (Nephritis)	25	8	20	13	32	1	33
Diarrhœa (Enteritis)	5	12	12	5	15	2	17
Cholera Infantum	4	1	2	3		5	5
Dysentery.....	3	2	3	2	4	1	5
Debility, General		1		1	1		1
“ Senile	16	10	7	19	25	1	26
“ Infantile	2		2			2	2
All other causes	169	85	156	98	186	68	254
TOTAL	324	204	308	220	388	140	528

Still-born Children—White, 26; colored, 23; total, 49.

Population of City—White, 184,500; colored, 69,500; total, 254,000.

Death Rate per 1000 per annum for month—White, 21.07; colored, 35.22; total, 24.94.

F. W. PARHAM, M. D.,
Chief Sanitary Inspector

METEOROLOGICAL SUMMARY FEBRUARY.

STATION—NEW ORLEANS.

Date.....	TEMPERATURE.			Precipn. in inches and hundredths..	SUMMARY.
	Mean	Min..	Max..		
1	64	55	72	0	Mean barometer, 30.122.
2	68	61	76	0	Highest barometer, 30.564, 8th.
3	66	58	73	0	Lowest barometer, 29.798, 27th.
4	54	49	58	0	Mean temperature, 61.2.
5	58	48	67	0	Highest temp., 79, 27th; lowest, 39, 8th.
6	65	57	73	0	Greatest daily range of temperature, 26, 23d.
7	56	47	66	T.	Least daily range of temperature, 7, 12th.
8	48	39	58	0	MEAN TEMPERATURE FOR THIS MONTH IN—
9	63	53	73	0	1871.....60.0 | 1877.....56.0 | 1883.....63.0 | 1889.....53.0
10	70	64	77	0	1872.....55.0 | 1878.....55.0 | 1884.....61.0 | 1890.....64.0
11	54	48	60	1.05	1873.....66.0 | 1879.....56.0 | 1885.....53.0 | 1891.....63.0
12	50	46	53	1.70	1874.....59.0 | 1880.....60.0 | 1886.....53.0 | 1892.....61.0
13	56	46	66	0	1875.....56.0 | 1881.....56.0 | 1887.....65.0 | 1893.....61.0
14	63	50	76	.14	1876.....59.0 | 1882.....62.0 | 1888.....59.0
15	73	68	78	.11	Total excess in temp'ture during month, 72.
16	73	69	77	T.	Total deficiency in temp'ture since Jan. 1, 36.
17	64	58	69	.08	Prevailing direction of wind, N.
18	55	48	62	0	Total movement of wind, — miles.
19	59	50	68	0	* Maximum velocity of wind, direction and date,
20	60	50	71	0	30 miles, from N. E., 26th.
21	59	50	68	.16	Total precipitation, 4.92 inches.
22	56	49	62	0	Number of days on which .01 inch or more of
23	59	46	72	0	precipitation fell, 10.
24	62	55	70	0	TOTAL PRECIPITATION (IN INCHES AND HUNDREDTHS)
25	64	58	70	.20	FOR THIS MONTH IN—
26	60	56	64	1.41	1871..... 1.59 | 1877..... 0.98 | 1883..... 1.59 | 1889..... 2.78
27	68	58	79	.06	1872..... 4.77 | 1878..... 3.50 | 1884..... 3.16 | 1890..... 2.27
28	64	59	70	.01	1873..... 1.93 | 1879..... 2.13 | 1885..... 2.39 | 1891..... 7.42
29	....	....	....	.....	1874..... 3.68 | 1880..... 4.62 | 1886..... 1.06 | 1892..... .04
30	....	....	....	.....	1875.....13.85 | 1881..... 5.80 | 1887..... 5.53 | 1893..... 4.92
31	....	....	....	.....	1876..... 8.20 | 1882..... 4.04 | 1888.....11.21
					Total excess in precipitation during month, 62.
					Total defic'y in precip'n since Jan. 1, 2.28.
					Number of cloudless days, 11; partly cloudy
					days, 9; cloudy days, 8.
					Dates of frost, —.
					Mean maximum temperature, —.
					Mean minimum temperature, —.

NOTE.—Barometer reduced to sea level. The T indicates trace of precipitation.

* To be taken from any five-minute record.

R. E. KERKAM, *Local Forecast Official.*

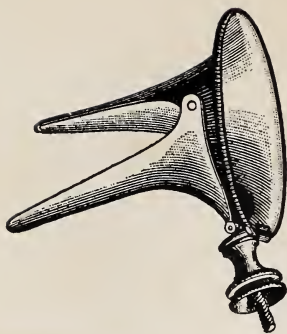


Fig. 1—DeRoaldes' Modification of Voltolini's Nasal Speculum.

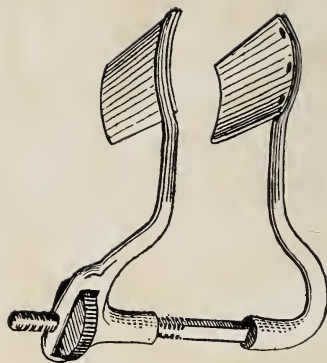


Fig. 2—Lennox Browne's Nasal Speculum.

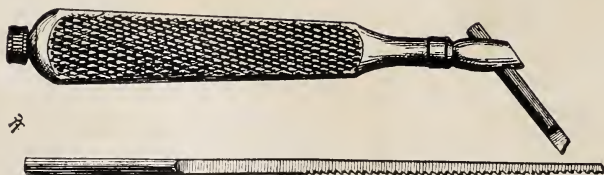


Fig. 3—Scheppegrell's Nasal Saw.

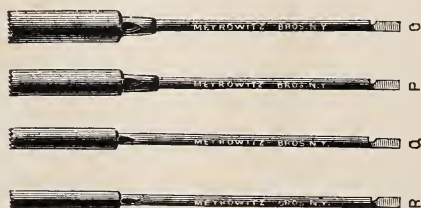


Fig. 4—Nasal Trephines.

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No. 12.

Original Articles.

[No paper published or to be published in any other medical journal will be accepted for this department. All paper must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

DEFORMITIES OF THE NASAL SEPTUM, AND THEIR INFLUENCE IN DISEASES OF THE EAR AND THROAT.

BY DR. WM. SCHEPPEGRELL, A. M., M. D.,

ASSISTANT SURGEON OF EYE, EAR, NOSE AND THROAT HOSPITAL, NEW ORLEANS.

In presenting to your attention the subject of "Deformities of the Nasal Septum," my object is not to make an exhaustive treatise on this subject, but to point out some of the prominent features in regard to the symptoms, diagnosis and treatment of these conditions, as well as showing you the importance of recognizing these deformities, on account of their influence in the etiology of diseases of the ear and throat.

Although no reference was made to septal deformities until 1760 (Quelmalz), it is by no means a rare condition. On the contrary, post-mortem examinations have developed the fact that over 75 per cent. of nasal septums deviate from the normal, and clinical experience proves the truth of this statement.

There has been much discussion as to the cause of this large proportion of deviations of the septum. Most authorities, however, favor the theory that traumatism is the most important factor in the causation of this condition. During childhood, especially, the blows and falls, in which the nose is involved, and to which little attention is paid at the time,

may tear apart the slender attachments of the component parts of the septum, or of its attachments to the crest of the superior maxilla or palatal bone, and lay the foundation of a deformity of more or less magnitude in later years.

Another theory, which, however, now has less supporters than formerly, claims that these deformities are due to an excessive development of the septum, which, being less resisting than the parts between which it is attached, yields and gradually deviates from the normal. This is probably the cause in a certain percentage of cases, especially in those septums characterized by a marked *deflection* from the median line.

The symptoms due to deformities of the nasal septum are those which we find in nasal stenoses generally, and are prominent in proportion to the degree with which the stenosis interferes with normal nasal respiration. The patient rarely calls in professional aid until the stenosis has set up some pathological condition in other parts, as the ear or throat; but, if asked, will admit that he has been unable to breathe freely through one or both nostrils for years. Occasionally, the projection of a septal ridge into the inferior meatus will be eroded by the impinging upon it of irritant matter in the atmosphere, or by the finger of the patient, and thus give rise to frequent hæmorrhages; but, as a rule, the patient complains of ear or throat troubles.

When the normal passage in one or both nostrils is obstructed by a deformed septum, the free entry of air through the nostril is interfered with, and the tension of the air behind the point of obstruction is diminished. The Eustachian tube, opening into the naso-pharynx, is supplied with rarefied air, and the equilibrium between the air external and internal to the tympanic membrane is disturbed. A chronic congestion is developed; the drum is gradually pushed inward, the mobility of the ossicles, by means of which the waves of sound are conducted to the nervous apparatus of the ear, diminished, and dry otitis media, with its symptoms of tinnitus and defective hearing, develops as a result of the nasal stenosis.

The importance of normal nasal respiration can not be over-estimated. In its important function of preparing the inspired air for the lungs it is necessary not only that the

mucous membrane and secreting glands should be in a healthy condition, but also that there should be no obstacle to the free ingress and egress of the air required for the lungs.

In a series of tests which I have made with a view of determining the speed at which the column of air passes through the nasal chambers, the details of which would carry me beyond the limits of this article, I found that the average speed in the forty cases in which the tests were applied was one hundred and forty-five feet per minute, the speed being higher at the middle and lower at the commencement and end of each inspiration and expiration. When one nostril was closed the speed of the column of air was increased so that the average was 288 feet per minute, or nearly twice the speed as when the column of air passes through both nostrils.

When air is inspired through an unobstructed nostril, the column of air, passing at a speed of about 145 feet per minute, is warmed to the temperature of the body, and moistened to saturation. It then passes to the lungs, without injury to the mucous membrane of the pharynx and larynx. When, however, the greater part of the inspired air passes through one nostril, on account of the stenosed condition of the other, the speed is increased, and may even be doubled in a complete unilateral stenosis, and the one nostril can but inadequately perform the function of both, not only from the excessive drain made on its capacity, but also from the speed at which the column of air is passing. The air then abstracts the complement of heat and moisture from the mucous membrane of the pharynx and larynx, and a dry throat, post-nasal catarrh, chronic pharyngitis and other morbid conditions of the respiratory passages may develop on account of the inability of the nose to perform its physiological function.

If the obstruction of the nostrils is sufficiently great, mouth-breathing is developed, due to the inability of the nose to supply the required air. This symptom is shown more frequently at night, when the horizontal position of the body favors a greater turgescence of the turbinated bodies. In mouth-breathing, the mucous membrane of the mouth and tongue is soon dried by the passing air, and the inspired air enters the lungs, without the proper degree of warmth and saturation.

If the obstruction due to a deformity of the septum is considerable, it also has a noticeable effect on phonation. Interfering with the passage of the waves of sound through the nostril, as required in the utterance of certain sounds, it gives the voice a characteristic quality, due to the imperfect nasal resonance.

Another effect of a nasal stenosis is its influence on sounds at a high pitch. Thus in singers we sometimes find an obstruction which does not interfere with the phonation required for ordinary conversation, or for singing their lower notes, but which has a marked effect on their upper or head register. Quite recently I was consulted by a professional, a baritone, who stated that while the range of his voice was from G, on the first line of the bass clef, two octaves to g, he sang the upper notes only with great effort, and he felt as if "something was keeping his voice back." Anterior rhinoscopy disclosed a ridge which partly blocked up the posterior part of the left nostril. The removal of this ridge not only remedied a chronic pharyngitis, but also gave to his upper notes the clearness which had before been lacking.

In addition to the injurious effects of a deformed septum due to nasal stenosis, we have occasionally a peculiar formation of the septum, which sets up reflex nervous manifestations in other parts. Many cases of asthma, cough and laryngeal spasm are due to the irritation of a septal spur, and cases are on record in which epileptiform seizures have been cured by an operation on a deformed septum.

Although, as we have seen, deformities of the nasal septum are of such frequent occurrence, it is only in those cases in which the deformity interferes with free nasal breathing, or sets up some reflex irritation, that operative procedures are called for. In 1000 cases applying for treatment in the Ear, Nose and Throat Department of the Eye, Ear, Nose and Throat Hospital of this city, only forty-two cases were found in which the deviation from the normal septum was sufficiently marked to be entered in the diagnosis book.

In sixty consecutive cases of malformation of the nasal septum, which I have entered in my case book, the association with other pathological conditions was as follows:

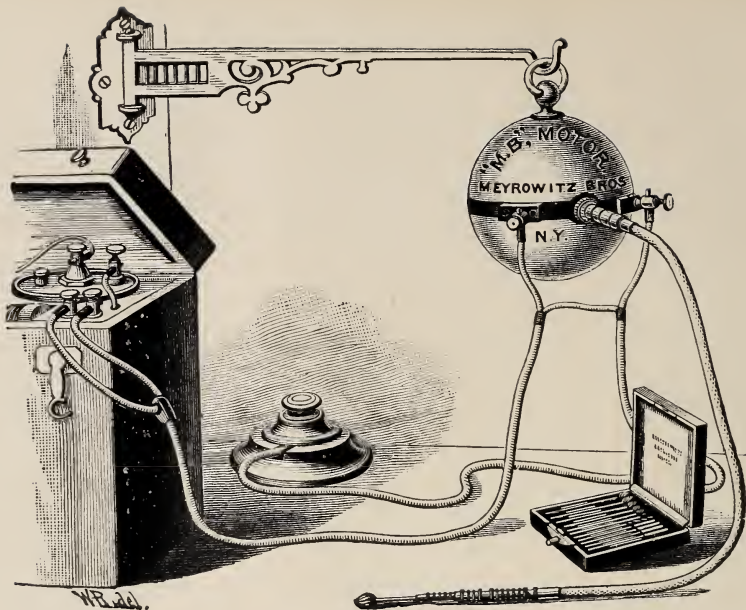


Fig. 5—" M. B." Electro-Surgical Motor.

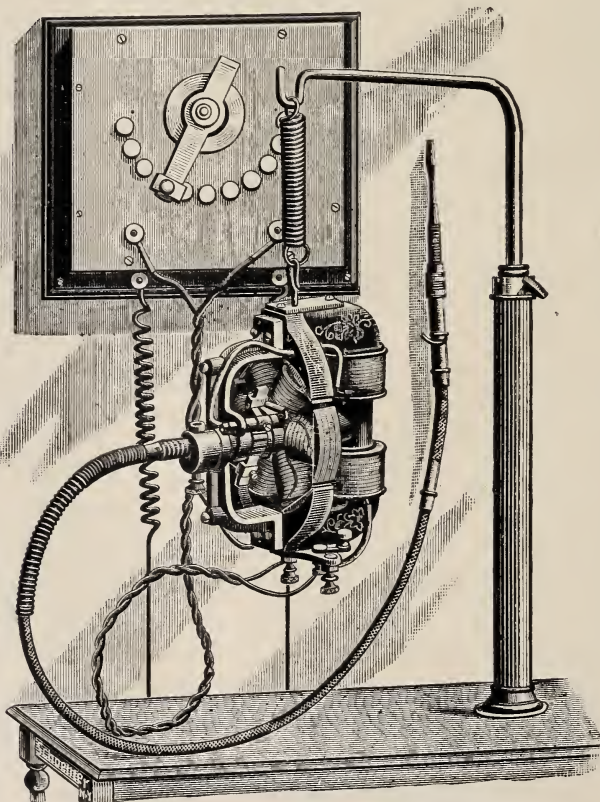


Fig. 6—The Edison-Leland Motor and Rheostat.

Associated with post-nasal catarrh in.....	9 cases.
Associated with chronic pharyngitis in.....	12 cases.
Associated with atrophic rhinitis in.....	6 cases.
Associated with hypertrophic rhinitis in.....	15 cases.
Associated with chronic laryngitis in.....	12 cases.
Associated with asthma in.....	1 case.
Associated with suppurating otitis media in.....	6 cases.
Associated with dry otitis media in.....	9 cases.

In many cases several of these conditions were associated together, the most frequent being chronic pharyngitis, chronic laryngitis and dry middle ear catarrh.

Occasionally we have cases of anosmia, due to a deformed septum, which mechanically interferes with the ingress of air into the olfactory region of the nasal chambers. These cases, however, are exceedingly rare, as the obstructions are rarely so marked on both sides as to develop this symptom.

The diagnosis of deformities of the nasal septum present no great difficulty in the majority of cases. Frequently the nose itself presents the signs of an injured septum, being deflected toward one side or the other, or being flattened as in the "saddle-back" nose.

In cases of marked stenosis of long duration, we also find the *alæ* of the nose drawn inward, giving the nose a characteristic appearance, and interfering still more with normal respiration.

If the patient be requested to blow through each nostril in turn, the other being closed, the column of air will be impeded if there is a marked deformity. As regards this test, however, any stenosis, due to any cause whatever, will interfere with the egress and ingress of air, and this test is perhaps more valuable as a negative than as a positive sign.

The best means of making a diagnosis of a septal deviation, and of obtaining details as to its size, position and conformation, is by means of a nasal speculum, the parts being illuminated by means of a lamp or other source of illumination, the rays of which are reflected and concentrated into the cavity by a head-mirror. The most universally practicable speculum which I have found for this purpose is a modification, by Prof. A. W. de Roaldes, of the nasal speculum of Voltolini, Fig 1.

The parts being well illuminated any enchondrosis, exostosis, spur, ridge or deflection may be recognized. In most cases

it is advisable to spray the nostril with a solution of cocaine of from 2 to 5 per cent. strength or to apply a 10 or 20 per cent. solution by means of a pledget of cotton on an applicator, as this causes a contraction of the tissues of the turbinated bodies and allows a clearer view of the outlines of the septum. A moist pledget of cotton in a nasal applicator will frequently assist the diagnosis, especially in posterior obstructions, as any septal prominence will offer more or less resistance to its passage through the nostril.

A very prominent anterior obstruction will occasionally obscure the diagnosis as to the condition existing behind it, the rays of light being shut off from the posterior part of the nostril. In these cases a curved probe will sometimes assist us in ascertaining the extent of the deviation behind the obstruction, and an examination of the other nostril will aid the diagnosis, as most concavities of the septum on one side are accompanied by a more or less marked convexity on the other. Still there are some cases in which the true state of affairs will be demonstrated only by the absolute removal of the anterior obstruction.

As deformities of the nasal septum exist in such a large proportion of cases, it is important to recognize the cases which call for operative procedures. Any marked stenosis of either nostril, interfering, as it does, with full normal respiration, demands an operation for its relief, and the urgency of the operation will depend upon the degree of the stenosis. Although no serious pathological condition may as yet have been set up in the ear or throat, this will probably be only a question of time and here the prevention is as preferable to the cure as in other cases.

It is not sufficient to ask the patient to breathe forcibly, and state that he "gets plenty of air," because the air appears to pass freely. Each nostril should be tested separately, and if the breathing is obstructed on either side, the cause of the obstruction should be removed. As explained before, one nostril may allow sufficient air to pass, but one nostril can not adequately prepare the air for the lungs.

One of my cases was a patient who had a large characteristically open atrophic nostril on one side, and an enchondro-

matous thickening of the septum blocking up the other nostril. This patient could inhale not only enough, but even a superabundance of air through the one nostril; but this nostril being chronically diseased, with most of its secreting glands destroyed, had but little effect in moistening the passing air, and the patient suffered from a dry pharyngitis and a chronic laryngitis. The removal of the obstruction from the other nostril, by allowing a portion of the air to pass through the still healthy nostril, caused a marked amelioration of the throat symptoms of this patient.

In regard to the treatment of deformities of the septum, I shall not detain you by giving a description of the various operations, more or less practicable, which have been suggested or performed to remedy this condition, but will describe to you the operation which I have found most serviceable in the greater number of these cases. For small cartilaginous obstructions, especially in children, whom we do not wish to alarm by a display of surgical instruments, I use the electro-cautery; for others, the trephine, operated by an electric motor, and the nasal saw.

Prior to the introduction of cocaine an operation on the nasal septum involved no little difficulty. With chloroform narcosis we lose the co-operation of the patient in regard to position and clearing the nostril; and the blood, tending to flow backward, becomes the source of no little annoyance. While the latter difficulty may be overcome by packing the choanæ, this itself retards the operation in many ways, and, besides, we are now disposed to look upon a posterior nasal plug as a source of danger to the middle ear.

When the operation was performed without an anæsthetic the patient suffered severe pain, and his involuntary movements added considerable difficulty to the work of the operator.

With the use of cocaine, however, the operation may be performed with but slight pain to the patient and the hæmostatic and contracting effects of the cocaine still more facilitate the operation.

Preparatory to the operation the patient is given an antiseptic wash containing boracic acid and bicarbonate of

soda, with which to cleanse the nostrils three times daily for several days before the operation. Before commencing the operation the nostrils of the patient are douched with a warm 2 per cent. solution of carbolic acid. The instruments, prepared with the usual precautions in regard to asepsis, are laid in a 5 per cent. solution of carbolic acid.

The nostril is first sprayed with a three per cent. solution of cocaine from an atomizer giving a delicate spray. This removes the normal irritability of the mucous membrane, and the part to be operated upon may then be saturated with a twenty per cent. solution of cocaine, which should be applied and well rubbed in with a pledget of cotton firmly rolled on a nasal applicator. In from five to ten minutes the part will be found thoroughly anæsthetized, and the operation may be commenced.

In using cocaine in operations about the nose, it should be remembered that the solution is rapidly absorbed by the Schneiderian membrane—much more rapidly than in the mouth or pharynx. The effects of the cocaine should, therefore, be carefully watched, and if the patient complains of weakness, dizziness, nausea, or a cold perspiration appears on his face, we recognize the toxic influence of the anæsthetic and use a weaker solution or substitute a 20 per cent. solution of antipyrine. A few drams of whiskey is the best antidote in these cases, and if the effect on the heart is very marked, the patient may, in addition, be allowed to lie down for a few minutes. Although using cocaine in many hundreds of cases I have never observed anything more than a temporary inconvenience from its effect, and have never had a case in which the operation could not be completed.

If the obstruction is small and cartilaginous, a small flat electro-cautery may be applied and the part reduced.

The instruments that will be needed in a septal operation are a nasal speculum, a nasal saw, a number of Curtis' trephines, with flexible shaft and motor for operating them, a pair of nasal scissors, an angular forceps, and a number of nasal applicators.

In these operations, the speculum of Lennox Brown is very useful, as it dilates the *alæ* widely, and is to some extent self-

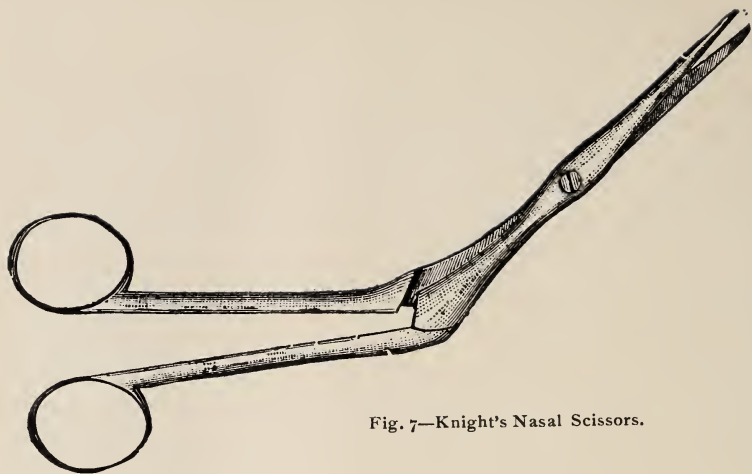


Fig. 7—Knight's Nasal Scissors.

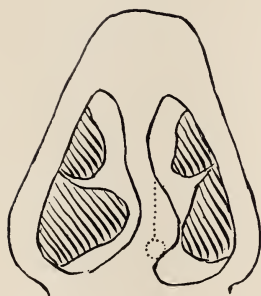


Fig. 8—Anterior Rhinoscopic View.

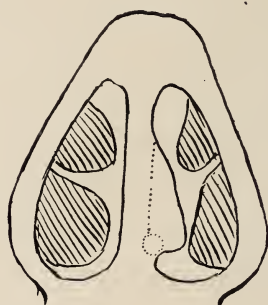


Fig. 9—Anterior Rhinoscopic View

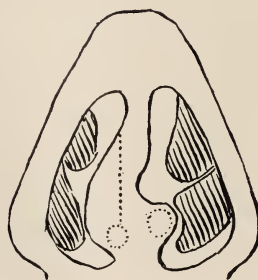


Fig. 10—Anterior Rhinoscopic View.

retaining, while its mechanical arrangement allows considerable space for the manipulation of instruments. Fig. 2.

In a serviceable nasal saw, the blade should be firm without being heavy, and the handle out of the line of vision. Fig. 3 shows a nasal saw which I have suggested, in which the blade may be revolved in any direction around its axis, and the set screw, which holds the blade in position, is below the handle and thus entirely out of the line of vision.

As much of the success in completing the operation depends upon the proper use of the nasal saw, it may not be inopportune to say a few words on this subject. The handle should be firmly yet delicately held, and the saw pushed rapidly backward and forward in a direction parallel to its cutting edge. The moment this line is changed, the teeth of the saw are driven into, instead of across, the bony tissues, or the blade is pressed against the lateral edge of the cut surface and the saw "binds," not from any defect of the saw, but from its improper manipulation.

The Curtis trephines (Fig. 4) are used either to open a trench in the upper or lower part of the obstruction from which to commence the sawing operation, or to bodily remove a small spur or ridge. The trephines may be operated by a dental engine, or by an electric motor operated by either a storage (Fig. 5), or chemical battery (Fig. 6), or directly from the Edison current.

The scissors which I have found most serviceable in septal operations are the Knight's, shown in Fig. 7. Being angular the hand is out of the line of vision, and the peculiar formation of the blades enables them to be used in both anterior and posterior obstructions.

The parts having been thoroughly cocainized, we carefully inspect the cavity with the eye and probe, in order to determine the method of procedure required in the particular case. Occasionally a septal spur may be removed by means of the trephine alone, but in most cases it will be found necessary to complete the operation with the nasal saw.

In order that the saw may enter at a proper line, sometimes a difficult matter on account of the nearness of the obstruction to the floor of the nostril, or from the acuteness of the angle

which the surface of the prominence forms with the median line of the nose, rendering it difficult to enter the saw without slipping, we first open a trench with the trephine. The blade of the saw is then introduced into this trench, and the saw rapidly operated in the manner already described, always remembering that the use of the saw is not a matter of strength but of dexterity.

During the progress of the sawing the patient's head should be steadied by an assistant, or by a specially made head-rest, as any movement of the head would prevent the surgeon from watching the progress of the operation within the nostril by throwing it out of the line of the cone of light from the head mirror, and would also hamper the movements of the saw. As a rule the teeth of the saw should be pointed upward and the cut made in this direction so that the path to be followed by the saw may not be obscured by the falling blood. Frequently, however, we will find it expedient to reverse this method and complete the operation by sawing downward, a trench having been made in the upper part of the obstruction to introduce the saw as from below.

After the solid part of the obstruction has been sawn through the mucous membrane and shreds may be cut with the nasal scissors. These, however, should be used only after the work of the saw has been completed, as the scissors are more apt to break a part of the bony septum than to cut it.

During the operation there is frequently considerable hæmorrhage, but this can usually be controlled by packing cotton firmly and well into the nostril. After a few minutes the bleeding usually ceases and the operation may be proceeded with.

In two cases upon which I operated I found the hæmorrhage unusually persistent. In both of these cases the blood accumulated so rapidly in the nostril that it could only with difficulty be cleared, so that the cause of the excessive hæmorrhage could be ascertained. In both of these cases it proved to be an active hæmorrhage, due to the severing of a branch of the anterior palatine artery, the blood from which could be seen spurting across the nostril. To control this a large number of nasal applicators were mounted with cotton; by rapidly using

one applicator after the other, the part was sufficiently cleared to apply an electro-cautery heated to a dull red. This procedure arrested the hæmorrhage in both cases, and the operations were completed without further complications.

The hæmorrhage in these cases could probably also have been controlled by packing the nostril firmly with iodoform gauze, but this would have necessitated the postponement of the completion of the operation.

After the operation has been completed with trephine, saw and scissors, it is advisable not to use the electro-cautery, except in a case of active hæmorrhage as described above. Unless the whole exposed surface of the septum is cauterized the application of the electro-cautery does not materially prevent hæmorrhage—on the contrary, the active inflammation which it sets up rather favors it—the reaction is more severe, and the healing process is delayed, as the burnt tissues must first slough off.

After operating for small obstructions, no dressing is needed. A blood-clot forms, and the part is soon covered with the aseptic secretion from the Schneiderian membrane, which is preferable to any antiseptic powder or spray that can be used.

In cases of large obstructions, however, and where hæmorrhage is feared, or in those cases in which the patient can not be easily seen, in case of a hæmorrhage, it is advisable to pack the nostril for twenty-four hours, or more, with iodoform (10 per cent.) gauze. The packing, however, interferes with the ready formation of a blood-clot by excluding the air, and is also annoying to the patient from its interfering with nasal respiration.

As the method of packing the nostril after septal operations is useful in all cases of nasal hæmorrhage, I will describe it here. A strip of iodoform gauze, three-quarters of an inch wide and one yard long, is used. The opening of the nostril is dilated with a nasal speculum, and, under proper illumination from the head-mirror, the strip of gauze is packed into the nostril by means of a flat applicator or probe. The posterior part of the nostril is first packed, and the gauze introduced inch by inch until the whole nostril is packed with the gauze.

Care should be taken that the end of the gauze does not protrude from or be too near to the posterior opening of the nostril, as the end occasionally slips downward and alarms the patient by making him cough and choke. In this event, the gauze should be removed through the anterior naris and the nostril repacked.

After the whole passage has been carefully packed, a small piece of absorbent cotton may be applied just within the nostril, which the patient may change as often as it becomes soiled.

Much has been said as to the liability of a septal operation opening a perforation in the septum, and the innocuousness of such a perforation. While I have seen a considerable number of perforations of the septum which did not seem to cause the patients any annoyance, except perhaps in the occasional formation of inspissated mucus about the opening, still a careful examination of the septum before the operation, watchfulness on the part of the operator, and proper manipulative skill in the use of the instruments, will obviate this surgical error, and the cases must be exceedingly rare in which such a perforation is unavoidable. In sixty consecutive operations for the removal of septal obstructions, I have not left a perforation of the septum in a single case. In one case only, the patient complained of a pain in the other nostril, and an examination proved that the blade of the saw had penetrated the mucous membrane of the other side of the septum. The saw was then reversed and the sawing commenced from above, the line of incision meeting the upward cut at a point below its penetration into the other nostril; and the part healed without leaving a perforation in the septum.

The complications which occasionally follow operations on the septum are hæmorrhage, synechiæ, cellulitis involving the face, and suppurative otitis media. Sometimes also there is odontalgia due to irritation of the anterior palatine nerve, which, however, passes off in a few days.

Hæmorrhage may be controlled by packing, or, if it is from a small area, by means of the electro-cautery. A synechia between the mucous membrane of the septum and of the opposite turbinated body is generally due to some

injury done to the mucous membrane of the turbinated body during the operation, and may be avoided by care during the operation. If, however, a tendency to form a synechia is developed, the parts, after being cocainized, should be carefully separated with a flat applicator, and this procedure repeated daily until the healing process has been completed.

Frequently a synechia proves very stubborn to treatment, and is remedied only by another operation, in which the synechia is taken out with scissors and saw, thus leaving considerable space between the septum and turbinated body.

Extensive cellulitis occurs rarely, and is due to septic infection from the site of the operation or to exposure on the part of the patient. In the only instance in which it developed in my cases it was due to the patient being saturated by a rain storm the second day after the operation and caused considerable anxiety on account of the extensive œdema of his face. It subsided in three days, the only treatment being directed to the asepsis of the operated nostril.

Suppuration of the middle ear is a rare sequela of a septal operation. It is said to be due to the penetration of septic material into the Eustachian tube. In the cases which have come under my observation, the otitis subsided under the usual treatment without leaving any permanent ear trouble.

I will conclude this article by quoting a few cases from my case book:

Case 137, Henry de B., æt. 12, was brought to me by his uncle, who stated that the boy had "catarrh" and that he "spoke through his nose." He also stated that he slept with his mouth open and that his hearing was bad.

The ears being examined, showed the drum on both sides retracted, and the hearing test gave $\frac{85}{100}$ for the right and $\frac{25}{100}$ for the left ear.

By anterior rhinoscopy, a thickened and deflected septum could be seen in the left nostril, leaving a concavity in the right nostril. This concavity had become filled up by an hypertrophied inferior turbinated body, so that the stenosis was exceedingly marked on both sides (Fig. 8).

The hypertrophied turbinated body in the right nostril was first reduced with the galvano-cautery. Two weeks after-

ward, the left nostril was thoroughly cocainized, the trephine passed through the lower part of the obstruction, as shown in the dotted lines (Fig. 8), and the operation completed with the nasal saw.

Although the boy was but twelve years old, he made no resistance during the operation, and tolerated a 20 per cent. solution of cocaine without any unpleasant effects. As the hæmorrhage was slight, the nostril was not packed with iodoform gauze.

The part healed kindly, without complications. One month afterward the nasal voice had disappeared, and he no longer slept with his mouth open. Three months afterward his hearing was tested, and gave the following result,—right $\frac{100}{100}$, left $\frac{75}{100}$.

Case 216, Paul J. A., a commercial traveler, 37 years old, consulted me in regard to a painful inflammation of the throat. Being asked how often he had suffered from this, he stated he had had "sore throat," at least, "a thousand times;" that his throat always felt "raw," and that with every change of the weather he had these exacerbations of painful inflammation of the throat. He also stated that his nostrils became completely closed up every night, that he slept badly, and woke up with his mouth "as dry as leather."

Inspection showed an hypertrophied uvula, and the fauces and pharynx inflamed, thickened and irritable. By anterior rhinoscopy, an enchondromatous thickening of the triangular cartilage was shown in the left nostril, and a general hypertrophy of the inferior turbinated bodies on both sides, so that the breathing space was much diminished. (Fig. 9.)

The hypertrophied turbinated bodies, on both sides, were first reduced by electrolysis. This decreased the stenosis of the nostrils, and the patient stated that he already felt much relieved on account of the freer nasal respiration. The trephine was then passed through the lower part of the obstruction, and the cartilaginous projection removed with the nasal saw.

As the hæmorrhage was considerable, the nostril was packed with iodoform gauze for 24 hours. The patient was then directed to wash the nostrils with a warm solution of boracic acid and bicarbonate of soda three times daily.

Six weeks later the cartilage was entirely covered with cicatricial mucous membrane, and the throat was found much improved. The patient was again seen about six months later, and stated that during the winter, through which we had just passed, he had had only "two sore throats," instead of a "hundred" as had been the rule during the past eight years.

Case 372 Samuel D., æt 36, by occupation a layer of "pressed bricks." He gave a history of a severe cough of eight months' duration, and a free expectoration of "a yellow mucus." He had been unable to follow his trade for eight months; for as soon as he began to work, he became "choked up," and commenced to cough. He had been under the care of seven or eight physicians in the North, by some of whom, according to his statement, he had been treated for consumption. He stated that he had taken "gallons" of cod liver oil, but had made no improvement.

A careful examination showed a catarrhal laryngitis and a chronic bronchitis. Posterior rhinoscopy gave negative results, but by an anterior examination a dislocated triangular cartilage could be seen entirely blocking up the right nostril. A septal ridge also projected into the left nostril, which was further occluded by an hypertrophied inferior turbinated body (Fig. 10). A microscopic examination of the sputum gave negative results as to the presence of the bacillus of tuberculosis.

The hypertrophy of the inferior turbinated body of the left nostril was first reduced with the electro-cautery. When this had healed, the lower part of the obstruction in the right nostril was drilled with the trephine, and the operation completed with the nasal saw and scissors. Hæmorrhage was slight and no packing was used. The patient suffered no perceptible reaction from the operation. Two weeks afterward the septal ridge of the other nostril was removed with the drill.

As soon as the nostrils were free, the patient began to improve; the cough lessened, and finally ceased, and six weeks after the operation the patient again resumed his work, being the first time in nine months.

Several months later the patient was seen again, and gave the following account of himself: "I never felt better in my life; I have been making six dollars a day for the last three months, and haven't lost a day. I feel like a new man."

CLINICAL REPORT OF A CASE OF HEPATIC ABSCESS.*

BY A. J. BLOCH, M. D.

VISITING PHYSICIAN TO CHARITY HOSPITAL; CLINICAL ASSISTANT TO THE CHAIR OF PHYSICAL DIAGNOSIS AND PRACTICE OF MEDICINE, NEW ORLEANS POLYCLINIC; ASSISTANT INSTRUCTOR IN PHYSICAL DIAGNOSIS, TULANE MEDICAL COLLEGE.

Mr. President and Gentlemen—My only excuse to read a paper before you this evening is prompted by a desire to furnish you with my unfortunate experience, which, probably, might be of some benefit to some of our members.

I was called on the 30th of March last to see a gentleman, sent from the country by his physicians to see whether surgical treatment could not be of benefit to him. Mr. B. was a native of Louisiana; his family history was free from tuberculosis or syphilis. Prior to January, 1892, he enjoyed excellent health, at which time he was first confined to his bed by fever and pain in the right side. After prolonged medical treatment he experienced no relief, and came five months subsequently to New Orleans. This proving of slight benefit to him he returned home, and again came to New Orleans, this latter time five months ago. Being discouraged, having experienced no benefit, he determined to return home and die. Whilst on the train, he was suddenly taken with most violent pains in the affected side, and in another moment he coughed up what he supposed to be a quantity of blood, but which subsequently proved to be liver pus.

The diagnosis of his trouble was quite evident now; his general condition being so much below par, his physician at home placed him on cod liver oil, quinine and a cough mixture. They did not attempt a free incision to remove the septic material, not knowing exactly where to locate the pus cavity. Thus his condition remained, constantly coughing up pus, continuous septic fever and great progressive emaciation.

Upon taking charge of his case, I immediately explored and located a pus cavity in the right lobe of the liver. I could not make out any definite destruction of lung tissue. There was an abundance of rales; these, however, might have been due to accumulated pus in the bronchial tubes. Dullness was well marked at the lower lobe of the right lung.

* Read before Orleans Parish Medical Society, April 29, 1893.

It was quite evident to me that a chronic pneumonia must have supervened from a constant irritation of the septic material coughed up. The day following my first examination, I had him sent to the New Orleans Sanitarium, and, on April 1, under chloroform, I resected the rib and made a large opening into the abscess cavity, removing fully one pint of very foul pus.

Fearing to irrigate under chloroform, as the cavity communicated with the lung and the water might clog up the latter and produce death from asphyxia, I packed the cavity with iodoform gauze and had the patient removed to bed. The patient rallied well; his pulse, as before the operation, was 155 a minute; his respirations 40. The following day I irrigated with a 2 per cent. solution of carbolic acid and substituted a drainage tube for the gauze. The change in his condition the next week was phenomenal; his temperature became normal; his pulse was reduced to 110, stronger and fuller; his appetite was inordinate, eating or asking to be fed whenever awake; his respirations from 24 to 28 a minute. He had been taking a tonic of iron and quinine, and when constipated a little sulphate of magnesia was given. Each day I irrigated the cavity with the carbolized solution, after which I injected peroxide of hydrogen, followed by iodoform and glycerine (3iv to 3vi). On April 15 I went to pay my daily visit. I found my patient in a very gratifying state; he complained a little of his cough, but so confident did I feel in a future recovery that I promised to let him sit up in ten days. He was prepared to be dressed by the nurse in attendance, the patient assisting himself in the preparation. As soon as I introduced the nozzle of the syringe into the wound he began to cough; this was nothing unusual, as I experienced the same difficulty every day. I stopped for a moment, which gave him relief, and began again very gently to remove the pus. This time the cough became violent; my patient became cyanotic; I immediately grasped his pulse; it could not be felt; I tried every means possible to revive him, with no result; he was dead. I was unable to hold an autopsy and can account for his death to shock only, produced by a rupture of liver attachments, with a flow of pus and water into the abdominal cavity, superinduced by the cough.

The points of interest in this case, gentlemen, must be very apparent to you. Death might have ensued from several factors; firstly, from asphyxia or drowning the patient by irrigation; secondly, from shock resulting from a rupture of adhesions between the liver, abdominal wall and diaphragm. Another cardinal point is the danger of delay in making an early incision, to prevent a communication with the bronchial tube. Once this communication is formed the graver does the condition of our patient become. The constant passage of septic material through a lung, no matter how healthy, must leave destruction in its wake, and should we succeed in effecting a cure of the primary and graver trouble, we leave a suitable nidus for the propagation of the tubercle bacillus. I feel confident that my patient suffered from some such trouble.

The conclusion I draw from this case is: All suspected cases of liver abscesses should be explored early; a negative result will not increase the danger of the patient, a positive one will surely be of inestimable benefit. If pus is located an early incision should be made and the cavity thoroughly evacuated. If a communication has already formed with the bronchial tube irrigation should never be practised, but in its place the cavity should be constantly packed with iodoform gauze. The latter will absorb the pus and disinfect the cavity and the patient will be spared the danger from which my patient died.

SOME REMARKS ON ASEPTIC SURGERY, WITH DEMONSTRATIONS OF STERILIZING METHODS.*

By T. M. MCINTOSH, M. D., THOMASVILLE, GA.

When John Hunter, more than a century ago, noticed that subcutaneous wounds healed without suppuration, the first principle of aseptic surgery was announced.

Wounds, therefore, were closed firmly to exclude air, the oxygen of which being thought the cause of suppuration, and in fact of all fermentative processes. The bad results from this led to the open methods of treatment, which prevailed more or less, modified in principle, until Sir Joseph Lister introduced the spray and elaborate dressing. This was sug-

* Read before the Medical Association of Georgia, April 19, 20 and 21, 1893.

gested by the observations of Prof. Tyndall, that the air was filled with myriads of germs, which collected, and in proper media would reproduce themselves and cause changes in containing media. These, Lister argued, were the cause of supuration, and logically excluded them from the field of surgical operations by his antiseptic spray.

Practical application soon demonstrated that the spray was a superfluity, and the author of it himself abandoned it. Then there must be some other source of wound infection than the atmosphere, and it must have been merely the cleanliness which gave to Lister's method its wonderful results and modern surgery its means of rapid progress and its crowning triumph.

The accumulated experience of practical surgeons has led to the idea that it is grosser causes of uncleanness that infect wounds; and this, with the discovery by the microscope of the micrococcus pyogenes has greatly simplified practical surgery, and given a clearer conception of the sources of wound infection, and clearer indications as to how to avoid them; and we endeavor more and more to do "aseptic" and not "antiseptic" surgery—to prevent infection, not to neutralize it. It may be that the distinction is one of "splitting hairs," but it might be that the lavish use of the vaunted bichloride solution would give a deceptive sense of security and a delusive surety of neutralizing, when the end desired can only be accomplished by greater care and time, in preventing entrance of infective causes.

While these advances have greatly simplified surgical technique and placed it within the power of any one to apply it, they have made clearer to the operator the greater responsibility which rests upon him, in the greater care and time which must be directed to preventive detail, "asepticism," than to the effort of destruction of germs by chemical solutions, "antisepticism."

The aim is to make a wound that is as nearly as possible in that condition, which obtains in a subcutaneous one, and which is done by thorough asepsis, and the least possible insult to the wound surfaces by contact with any extraneous substances, even though they be sterilized.

The trend of surgical work at present is that we must look

more to the grosser causes of wound infection and not the atmosphere—that an unclean person of the subject and the field of operation, the hands and clothes of surgeons and assistants, sponges, sutures and gauze, rust, dirt and blood of instruments, are the sources of infection, and when a wound is made with these causes eliminated, properly dressed and immobilized, that condition is obtained which is as near as possible to the subcutaneous wound, and in such wounds (aseptic) it is unnecessary, and may be harmful, that any antiseptic solution should come in contact with it, because such substances cause departures more or less from the conditions of subcutaneous wounds, and by their very nature may produce more or less irritation—certainly more than simple sterilized water.

The difficulty of always making a thoroughly aseptic wound is evident, and even the biologist and bacteriologist can not always obtain pure cultures; but to obtain purity of culture media they do not use chemical germ destroyers, for this spoils both the culture media and the germ desired to be cultivated. So in a wound, the solution strong enough to destroy the micrococcus pyogenes, or other sources of infection, would injure the natural healing condition and the inherent power to resist and destroy infections present.

The bacillus of anthrax being the most retentive of life, it is the standard of experiment. A 5 per cent. solution of carbolic acid at ordinary temperature requires thirty-six days to kill it; at 75 deg. C., 15 minutes. One and four-tenths solution of carbonate soda, 30 to 60 minutes at 75 deg. C. Boiling water, 100 deg. C., in 2 minutes.

As bearing also upon the use of antiseptic solutions it is interesting to mention the experiments and investigations of Metschnikoff and others upon the behavior of the wandering cell. This cell he regards as that which resists the attack of the micrococci of disease by “eating it,” as it were for its own growth. These phagocytes, as he calls them, exist normally in the healthy body. When the micro-organism of a disease is introduced there is an irritation, and the phagocytes collect at this point in great numbers and destroy the disease germ and aid in the formation of a limiting membrane of plastic lymph. In this battle, if the invading germs be not in too great num-

bers, the phagocyte will triumph and a healthy condition is maintained or re-established. In noting this process under the microscope and testing the influence of various chemical solutions upon it it was observed to check it—the phagocyte being seen to disgorge an invading cell which it had partially “eaten.” Sterilized water and very weak alkaline solutions had little or no effect. Again, it is well known that the admixture of any chemical solution with the blood prevents rapid and firm-clot formation, and that a 6 per cent. sodium chloride solution will maintain the fibrin in solution in the blood plasma.

In view of these experiments and observations it might be that we do injury by the introduction into fresh wounds of antiseptic solutions by impairing the resistive power of the tissues or the phagocyte and lessening the firmness of the blood clot, the natural and best hæmostatic. So it would seem that only on towels, sheets, hands and unbroken skin do we find a place for the sterilizing effects of chemical solutions where they can be used without harming the tissue sufficiently strong to kill the germs.

These remarks must not be construed as an attack upon, or as undervaluing the results of, antiseptics in surgery, but merely to direct attention to, and thought upon, the real causes that have led to such brilliant surgical achievements, and that we have, perhaps, not had the true conception of wound treatment in the use of antiseptics, which may have been harmful by injuring the tissue and creating a feeling of false security when we have used them.

The aim is, therefore, prevention, “asepsis,” not destruction, “antiseptis.”

When we were boys and swam for hours in ponds and streams we noticed the good effect upon our traumatic shins and great toes. The sores of Lazarus were licked by dogs and were “cured.” It was cleanliness.

Now as to how to carry out all these principles and details in practice: First recall that from dampened surfaces arise no dust or impurities, and this applies to the wetted walls and floors of operating rooms.

Preparation of subject: take a case of accident, and not in operating room; first wash the part to be operated on by

thorough scrubbing with soap, warm water and brush for five or ten minutes, then wash with 1-2000 bichloride solution; and to more thoroughly remove dead epidermis the writer washes the parts with 10 per cent. carbonate of soda solution. The entire body is then enveloped in sheets wet with bichloride solution 1-2000, and the wound irrigated for ten or fifteen minutes with sterilized water. In cases not of accident, the entire body is bathed, clean clothes put on, and the operating room wetted, and no fluid whatever is put in the wound unless for special reason to wash pus or blood from the cavities. If a laparotomy is to be done the abdomen is washed with ether to more thoroughly remove the oil of the skin.

The hands of the operator and assistants are scrubbed in the same manner, especial care being devoted to the finger nails. The instruments, etc., to be used are placed conveniently on wetted sheets. If in an operating room sterilized aprons should be put on by the operator and assistants. It was the writer's good fortune to remain the greater part of 1891 in Europe, chiefly in Berlin and Vienna, and the methods here described will be those, more or less modified in minor detail, carried out in the clinics of Von Bergman, Schweigger, Hirschberg, Martin, Olshausen, Billroth and Leopold of Dresden.

The brushes are kept, when not in use, in 1-2000 bichloride solution and boiled before use. I prefer to clean them in strong soda solution and put in sunshine wrapped in towels, and boiling before use. Instruments are first thoroughly brushed with soap and warm water, boiled for five minutes in 1 per cent. soda solution; sponges are soaked for seven days in 25 per cent. solution carbolic acid, changed each day and washed with soap and water, and on the seventh day sponges so treated are ready for use. These I prefer to cleanse with strong alkaline solution, and if they are new first dissolving the particles of lime in them with a weak solution of sulphuric acid; few surgeons, however, use sponges, but sterilized gauze instead. The method of sterilizing and preserving ready for use the gauze, catgut and silk is strictly that of Von Bergman in Berlin. The catgut is soaked for twenty-four hours in sulphuric ether, to dissolve all fats, and kept in 95 per cent. alcohol, in which is dissolved 1 per cent. of bichloride mercury. This is changed each

day until there is no cloud or sediment ; silk is boiled and kept in same solution ; gauze for sponges, towels and aprons are sterilized for an hour by steam, in a specially constructed sterilizer.

While being fortunate enough to have an operating room (with a few beds in adjoining rooms for keeping patients after operations) constructed so that every part of it can be thoroughly wetted, in which there is all the necessary sterilizing apparatus for gauze and instruments, it is found convenient to have a metal-partitioned case, in which to keep silk and catgut on spools in little glass jars filled with Bergman's solution, and so made that the ligatures and sutures can be drawn out as needed for use with no danger of infection ; a jar for drainage tubes and dry iodoform, in which I rub my gauze as needed for use with my hæmostatic forceps ; a measuring glass for a bichloride solution in a small bottle, of such strength that one drachm. makes one pint of 1-2000 solution. Another zinc vessel, also with holes in the sides, near top and bottom, which can be opened when contents are being sterilized and closed when it is done, in which is placed the gauze used for sponges. This vessel with contents is placed in the steam sterilizer for an hour, taken out, door closed, placed in a clean pillow case and is ready for transportation, and can so be kept.

This vessel for gauze is in use in Bergman's clinic. The steam sterilizer is composed of three cylinders ; the internal one of zinc, in which is placed the vessel full of gauze, aprons, etc. ; the next one of copper, which is full of water, in which the central one sets ; the outer one is the heat chamber, in which both the other two set, as it were. The heat applied to the bottom of the middle vessel passes up and out at the open top of the outer one ; the steam passes from the middle vessel up and down into the internal one (these both being closed at the top), through it penetrating the gauze to the bottom, where there is an escape. The instruments are placed for boiling in baskets of non-oxidizable metal which can be set in any suitable boiling vessel, and taken out almost dry ; or the instruments can be wrapped in a towel, and dropped into the boiling water and withdrawn by a string previously tied around them. Boiling pots are at hand anywhere.

The method for making gauze and absorbent cotton ready for sterilization is, so far as I know, my own. The cheese cloth of the stores and the cotton of the markets is soaked for one week in 10 per cent caustic soda solution, removed and boiled for one hour, washed in water, boiled again, washed, dried and sterilized.

If for use in packing open wounds or unclean cavities, it is desired to increase the rapidity of its capillary absorption, wetting it in one part glycerine and three parts water, and drying, will accomplish it. Billroth, who does not use iodoform gauze, readily prepared, does so in this manner: Iodoform 250 grains, glycerine 1000 grains, mix and add alcohol 4000 grains. This makes a solution of the iodoform, in which the gauze is soaked, removed and dried and is ready for use.

The specimens of gauze—simple glycerine and iodoform, —here shown, are made by myself and at from one-fourth to one-third the cost of the ready made, and one is sure of what is used.

The thoughts in this paper and the preparation of these means for my personal use for making clean wounds have been of much interest to me and I trust they may be so to others.

The remarks on aseptic surgery are expressions of thought which I have had for a long time; and ten years ago, in a paper before this body, it was ventured to say that in "boiled water" we had the sterilizing means in surgery; and as but few surgeons now use chemical solutions in wounds, sterilization by steam and boiling water will be, it seems, the shibboleth of future surgery.

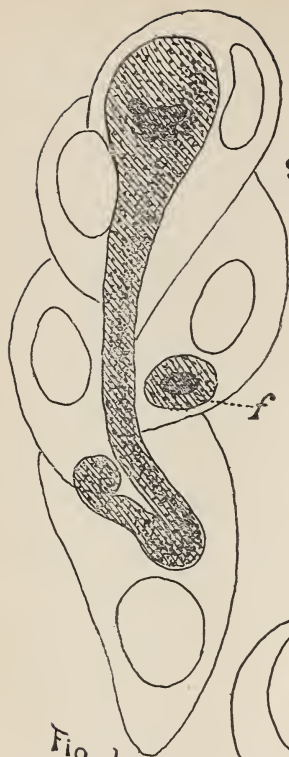


Fig 1

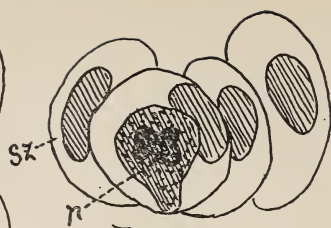


Fig. 2

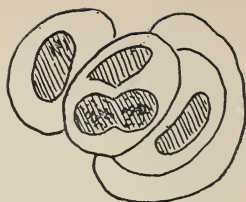


Fig. 3

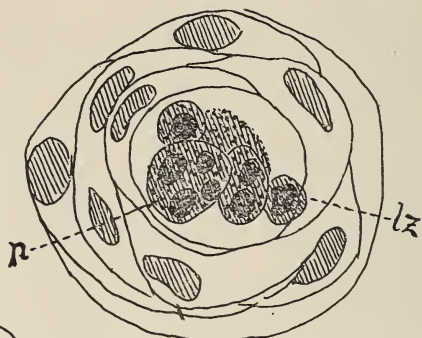


Fig. 4



Fig. 5

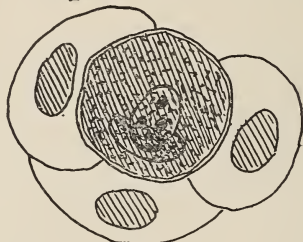


Fig. 6



Fig. 7

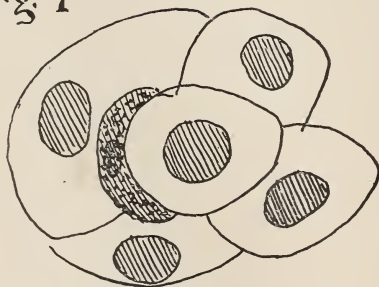


Fig. 8

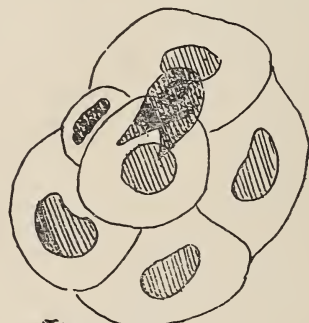


Fig. 9

Selected Article.

RHOPALOCEPHALUS CARCINOMATOSUS (CANCER-PARASITE).

BY PROF. ALEXIS KOROTNEFF, OF KIEV.

(*Preliminary Communication.*)

Translated from the *Centralblatt für Bakteriologie und Parasitenkunde*, by A. McShane, M. D.

It is not necessary at the present time to present a critical review of the literature of cancer; this has already been done by Profs. Podwyssozki and Savtschenko, and I content myself with giving my own observations, and referring to statements in my former articles that have some bearing on our present subject. Much has been written on cancer in the last two years, but it is still raw material, since the known facts are isolated and have not been brought into accord or relationship. It seems to be well settled that carcinomatous growths are due to a parasite, and an animal parasite at that; but is there only one form or are there several? Are there various stages of an unknown development or morphologically mature forms? These are still open questions. After studying the observations of Kossinsky, Sudakewitsch, Podwyssozki, Savtschenko, Vedeler and others, I theoretically came to the conclusion that the completely developed form is as yet unknown; this view is practically confirmed.

My observations refer chiefly to a carcinoma of the lip, which was kindly given to me by Prof. Dr. Rinneck. I had also examined other carcinomata (of the maxillary region, etc.), but they always present the same appearance; a notable exception occurs only in colloid cancer, and it is probable that this neoplasm is due to another parasite. I must here state that the figures and descriptions given by various observers, who have investigated a large number of cancers, correspond perfectly with my own observations, and contain scarcely anything that I have not seen.

The fully developed form, which, on account of its morphological characteristics, I have called the *Rhopalocephalus carcinomatosus*, has a tape-like, I might almost say tapeworm.

like, appearance (Fig. 1). It has a thickened head, which is attached to a long body. In the head there is a nucleus, which, however, has no definite outlines, and is to be regarded as a spot rather than as a vesicle. This spot consists of a coarsely granular plasma, and is stained a brick-red color by Biondi's stain, while the rest of the body acquires an orange tint. The body of the rhopalocephalus is sharply defined, sends out no pseudopodia, and consists of a finely granular protoplasm; the general appearance shows that we have to deal with a *gregarina-like* organism. In the neighborhood of the fully developed form are found numbers of young parasites, which have an elliptical shape, contain a coarsely granular spot (nucleus), and lie inside of the cancer-cells; as the organism grows the cell becomes elongated, and the parasite in time oversteps the boundaries of the cell (Fig. 1). The young parasite has a specific influence upon not only the cell in which it lies, but also upon neighboring cells. The invaded cell becomes notably larger, acquires a spherical shape, and then exerts a mechanical action upon the surrounding epithelial elements; the latter are subjected to a centrifugal pressure from the interior cells that have been invaded, and also to a counter-pressure from the surrounding normal elements; in this manner the cells in the middle zone become flattened and sickle-shaped, and surround the central parasite-cells in a concentric manner (Fig. 2). I must here state that the young parasite is already capable of multiplying by fission (Fig. 3); this makes the centripetal pressure become greater and greater, and the number of sickle-shaped cells becomes notably greater; in this manner *cell-nests* arise, and I think that in the centre of every cell-nest one more parasites can be found which develop by fission.

While this process is going on the central cells of the nest change; they undergo a retrograde metamorphosis, breakdown and form a detritus, in which the gregarinoid forms often lie. This detritus undoubtedly plays a highly important part in the extension of the infection. It is to be noted here that the gregarinoid forms in an earlier stage of development have already been observed by Savtschenko and Vedeler.

Let us trace out the developmental cycle of the rhopalo-

cephalus. We see that not all the young parasites assume the form represented in Fig. 1; some of them have a well defined nucleus with a nucleolus and chromatin, and are enclosed in a highly refracting capsule. Such a varied development is due to changes in nutrition; when this is good, the parasite grows, but when it is scanty, it remains encysted (Fig. 5). The encapsulated form soon becomes coccidiform; it has been described by Kossinsky and Sudakewitsch. This form looks like a ball with a strong double-contoured wall, and contains a germinal vesicle in its finely granular contents.

This coccidial form is to be regarded as a starting-point for the whole development of the rhopalocephalus, for in their interior arise larvæ, to which I have given the name of "Zoöids" (Fig. 6). These larvæ leave the maternal organism, force their way into neighboring cancer-cells, and there develop into complete gregarinoid organisms. Without going deeply into the question of the origin of the zoöids, I will here only say that they are formed partly from the chromatic germinal vesicle and partly from the coccidial plasma. The zoöids are ovoid and pointed. The zoöids, however, are not the only successors of the coccidium: still other descendants of this fundamental form—they are generally the characteristic sporozoöids for sporozoa (sickle bodies of Bütschli, *corps falciformes* of Balbiani)—elongated and generally bean-shaped, curved bodies, which consist of a hyaline cyst and mass of protoplasm internally, which does not contain a nucleus capable of being stained (Fig. 7); this protoplasm seems as though it were separate from the cyst, forms the central axis of the sporozoöids, and retains this position by means of three hyaline bands, which are fastened to the walls of the cyst. The sporozoöid may be compared to a zoöid that has acquired a cyst; there is scarcely any other essential difference. Every coccidium possesses at some stage of its growth only one zoöid or sporozoöid, and never the two formations together.

We will now see the fate of these successors of the coccidia. After the liberation of the zoöid from the coccidia, and its invasion of the cancer-cell, as mentioned above, it develops into a gregarinoid form or an encapsulated coccidium. The

change in the sporozoöid is a very significant one; after its liberation from the cancer-cell it breaks through its cyst, and the internal plasmatic body winds itself around one of the cancer-cells *without penetrating it* (Figs. 8 and 9); it soon becomes flat, increases in width, sends out pseudopodia on all sides, and in a word, becomes an amœba with a faintly defined nucleus (Fig. 10). This amœba grows very quickly and makes a space between itself and the cancer-cells, in which it can assume very different forms (Fig. 11). The nucleus of this amœba is long, and is easily distinguished from the nuclei of the cancer-cells. The number of the amœbæ is often considerable, and in the above-mentioned carcinoma of the lip, which I have studied chiefly, the whole tumor swarms with amœbæ of various sizes. That this highly important peculiarity of carcinomatous growths has been overlooked until now is explained by the fact that the various methods of preserving the tumors, and the subsequent treatment after being cut, have caused the originally flat organism to disappear completely. Hardening in sublimate solution and cutting with the free hand without imbedding in paraffine, makes the presence of the amœbæ quite evident. The amœbæ of carcinoma do not confine themselves to the epithelial layer, but they penetrate the connective tissue, and I opine that they force their way very extensively through the infected organism, and give rise to the cancerous cachexia. It is not impossible that the amœbæ are present in considerable numbers in the various organs of a cachectic patient.* But that is only a supposition, which requires further investigations.

The cancer-amœba presents the following peculiarities: if the intercellular space, which is occupied by the amœba, becomes large, a capsule appears, which does not surround the parasite itself, but lines the space, and is not round in shape, but appears irregular; the amœba being connected with the capsule by means of numerous pseudopodia. In the same manner as in the coccidial form zoöids and sporozoöids arise in the interior of the amœba; and, since the mass of the amœba is much larger than that of the coccidium, these formations can de-

* The molecular products of the parasite are certainly sufficient to give rise to the intoxication, but the amœbæ, in forming new cancerous foci, must lend to the cachectic process an intensive and specific character.

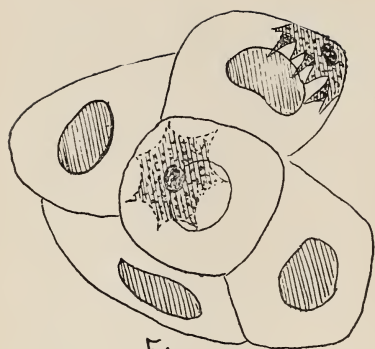


Fig. 10

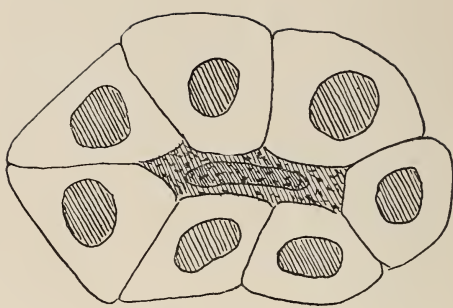


Fig. 11

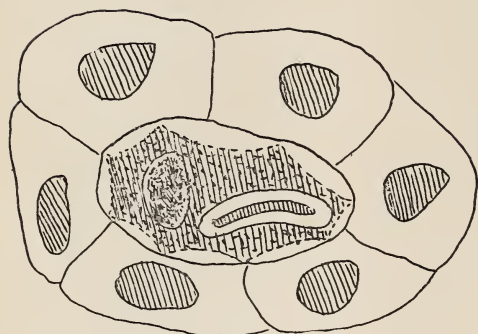


Fig. 12

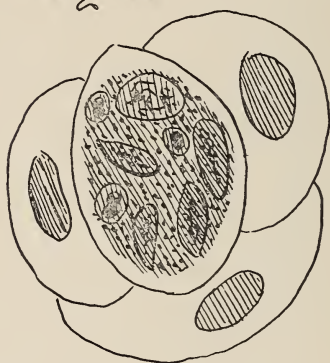


Fig. 13



Fig. 14



Fig. 15

velop to a much greater extent: thus we see (Fig. 13) four zoöids in an encapsulated amœba; and it may also be that at the same time zooids and sporozooids arise in the same amœba. In the subsequent stages of development, the zooids always become coccidia, and the sporozooids always become only amœbæ.

Often we see special formations between the cancer-cells, which represent an agglomeration of alveoli with strongly refractive contours (walls); the interior of the alveoli is mucoid and stains very feebly (Fig. 15); they are empty cysts of sporozooids, which are devoid of protoplasmic contents and are usually taken up by the lymphoid cells. I find that the opinion recently advanced (Ruffer and Walker) that they are dead parasites is untenable.

The facts disclosed concerning the rhopalocephalus show that we are dealing with a specific entity, in which peculiarities of two different groups (coccidia and gregarinæ) are brought together. They show on one hand, the alternation of two developmental phases, namely, a free (amœba) and an encapsulated, indicating a coccidium; on the other hand, the morphological peculiarities of a fully grown rhopalocephalus and a copulation which I have often observed, indicate a true gregarina. It is known that in the coccidia the number of sporozooids is usually small, or even single—I found that to be always the case with the rhopalocephalus; but to judge from Savtschenko's description, we must assume that the sporozooids can also be very numerous, which in a way would point to the gregarinæ. We can, with perfect right, regard the rhopalocephalus as an intermediate form from coccidium to gregarina.

A very debatable question is the relation of parasite to the etiology of cancer; we can form a very reasonable conjecture. We find a clue in the question: What influence does the parasite described exert upon the cancer-cells in which it finds itself? It has already been stated that the parasite causes the invaded cell to swell up without becoming enlarged itself. This peculiarity is noted in the surrounding cells: the cells do not enlarge, the carcinoma does not grow under the influence of the parasite, and I might say further, that the cancer-cells grow

precisely at the points where no parasite is present. The ground is not produced by the parasite, but, nevertheless, the change that it brings on is very significant. The observations already made show that the regressive process, which characterizes cancer, arises from the rhopalocephalus, which produces necrosis of the cells and the destructive influence which the new formation exerts upon the general system. I venture to say that, theoretically, a carcinoma without parasites can have no special bad effect practically, or better, clinically, carcinomata appear to act upon the organism in different ways; the disease, as is well known, often assumes a very latent form; and I have been informed by several clinical authorities that in old age forms of cancer appear that run their course without affecting the lymphatic glands. I might say that these non-infections are, in a measure, harmless, and probably non-parasitic; thus a carcinoma is a harmless epithelial new-formation, which may be compared with any other epidermic formation (hair, hoofs, claws, corns). Quite another question is this: Wherein lies the impulse of an abnormal epidermic formation of a cancer. Here, however, we may say that numerous clinical observations authorize us to say that the answer is to be found in a traumatic cause, which gives rise to a local disturbance of nutrition.

Villefranche-sur-Mer.

Proceedings of Societies.

MINUTES OF MEETING OF ORLEANS PARISH MEDICAL SOCIETY, APRIL 29, 1893.

The meeting was called to order at 8:15 P. M., by the retiring president, Dr. Chas Chassaig nac. There were twenty members present.

Dr. Chassaig nac said that his only duty was the pleasant one of turning over his chair to his successor, Dr. A. W. de Roald es.

Dr. A. W. de Roaldes then took the chair. He thanked the society for the honor it had conferred on him in electing him to its highest office; and he said that coming after such an efficient president as his predecessor, his task was not such an easy one; but that encouraged by the ability of his co-officers and sure of the active collaboration of all the members he hoped to guide the society through another year of profitable discussion and mutual advancement.

Dr. Magruder then gave up his seat to his successor, Dr. A. McShane, who thanked the society for his election.

The minutes of the previous meeting were read before adopting them. Dr. Chassaignac said that he desired to have mention made of the reason why the building committee had failed to take action. Dr. T. G. Richardson at one time spoke in such a way as to lead the committee to infer that he intended to donate his medical books to the library, and also to assist in the erection of suitable quarters for a medical library. The death of Dr. Richardson upset all their plans. Nothing was done by committee on that account.

Dr. A. G. Friedrichs, chairman of the Committee of Entertainment for the State Medical Society, reported progress. In order, however, to save the committee from possible embarrassment, he moved that one hundred dollars be put aside for the entertainment of the State Medical Society, to be used in part or whole according to the needs of the committee. Carried.

Dr. H. B. Bruns, chairman of the Judiciary Committee, reported favorably on the applications of Drs. T. S. Dabney, Hy. Menage, and E. M. Dupaquier. The report was received.

The election of members being in order, the following gentlemen were unanimously elected: Drs. T. S. Dabney, Hy. Menage, E. M. Dupaquier.

The secretary read a communication from Dr. A. R. Trahan, now of Lafayette, La. Dr. Trahan declared his intention of removing to Lafayette, and desired to know if he could, as a non-resident of New Orleans, retain his membership in the society.

Dr. Chassaignac moved that Dr. Trahan be kept on the roll of active members until we hear further from him. Carried.

Dr. A. J. Bloch read a paper on "A Case of Abscess of the Liver." (See original articles, page 898.)

DISCUSSION.

In reply to a question of Dr. McShane, Dr. Bloch said that no search had been made for the *amœba coli* in the pus from the abscess.

Dr. de Roaldes asked concerning the size of the cavity and the prognosis. Dr. Bloch said that the cavity was very large; the patient was getting rapidly worse, and when first seen death seemed to be but a question of a few days. An operation was imperatively demanded.

Dr. Chassaignac said that the thanks of the society were due to Dr. Bloch for a graphic report of his case. It was highly interesting, not only on account of its clinical features, but it possessed the rather unusual merit of reporting a fatal termination.

Many writers unconsciously acquire the habit of not reporting their unfavorable cases. Dr. Bloch's case impresses one important fact—namely, that the patient is not entirely out of danger even when the pus escapes freely through the lung. He believes that if Dr. Bloch had continued to pack the cavity with iodoform gauze instead of injecting a liquid, the patient would have made an uneventful recovery. He does not see how a little coughing could tear open such firm adhesions as must have existed in a case of such long standing. He disagrees with Dr. Bloch, however, in attributing death to the escape of liquid into the peritoneal cavity. He can not realize how the introduction of a comparatively small amount of warm water into the peritoneal cavity could give rise to fatal shock. In these days of abdominal surgery, we drench the cavity with warm water without shock resulting.

Dr. Bloch said that he had arrived at that conclusion by a process of exclusion.

Dr. Sexton said that an abscess of the liver may open in several different directions:

It may discharge into the stomach, the intestines, through the diaphragm and the right lung, and it has been known to burst into the pericardium. It is not improbable that the injected liquid might have found its way into the pericardium in Dr. Bloch's case, for the heart stopped before the respiration. We need not be surprised at the fatal result in Dr. Bloch's case; most of his own cases had died. Those of his cases that recovered were usually superficial abscesses of the left lobe; the large abscesses of the right lobe were generally fatal. He has a case now under treatment in which the abscess was in the right lobe, and was quite large. He made an incision about four months ago, between the fifth and sixth ribs, and evacuated about two quarts of pus. He practised irrigation, and passed a drainage tube through the opening. The cavity shrunk up so much that the tube could no longer be introduced. The man's wife has for some time performed the irrigating. The patient is now strong enough

to come to the doctor's office. He has gained fifteen pounds in weight. Dr. Sexton condemns trephining of the ribs as a routine practice in abscess of the liver for the following reasons: necrosis of the exposed ends of the ribs is bound to take place, and thus a new disease is added to the old one. Furthermore, pus is apt to be absorbed through the cancellous tissue of the bone. Second, the traumatism incidental to the operation complicates the case; third, the sharp ends of the rib after the operation act as an irritant to the surrounding soft parts. Dr. Sexton has now in his service in the Charity Hospital a man whose rib had been resected for empyema. The empyema is well, but the man wants to have the necrosis attended to. Where practicable, a free incision in an intercostal space is to be preferred to resection. Last year he had a case of superficial abscess of the left lobe that was working its way to the surface; the diagnosis was very easy. In order to help the pus to reach the surface, he directed the patient to lie always on his stomach. He did this for awhile, and his condition was all that could be desired; but he became tired of lying on his belly all the time, and he changed to the dorsal position. The pus infiltrated the deeper parts of the liver and the man died.

Dr. Bruns said that many persons imagine that an examination of the pus from an hepatic abscess can reveal its source. That is a fallacy that ought to be done away with. Pus from a liver is just the same as any other pus.

Dr. De Roaldes did not think that the injection of warm water into the peritoneal cavity could have caused death from shock. During the Franco-Prussian war, while he was a surgeon in the French army, Dr. Robert, now practising in Pau, was abandoned at Amiens, after the battle of Sedan, as unable to continue in service on account of sickness. Subsequently his old teacher, Dr. Moutard-Martin, diagnosed a hepatic abscess. The abscess was opened with a free incision, and irrigation practised. During the irrigations the doctor frequently spat up mouthfuls of injected liquid. Dr. De Roaldes saw Dr. Robert two years ago; he was then a healthy man, and did not at all look as though he had once been regarded as a hopeless invalid. In those days resection of the ribs had not become popularized. Altogether Dr. De Roaldes had treated about thirteen cases; of these only two recovered. One of the successful cases was a vegetable dealer, of strong build. He resected one and one-half inches of rib, which afforded free drainage; but he afterward had to treat the necrosis of the exposed ends of the rib. In the other case the abscess was opened with the galvano-cautery, and simply irrigated. In another case, in consultation with Dr. Gaudet, the

abscess was also opened with the galvano-cautery and the cavity packed with iodoform gauze. In a case that he saw with Dr. Renshaw, of this city, the abscess was opened and irrigation practised. One day while they were irrigating, some liquid came out that had not gone in; the patient's wife recognized it as some broth that he had swallowed a few minutes before. He also vomited some carbolized water and had a diarrhœa of carbolized water. Later, a solution of some analine-dye was injected, and the man vomited some of the colored liquid, and had a colored diarrhœa.

Dr. Matas said that he regretted that he had arrived too late to hear Dr. Bloch's paper. The subject was one of unusual interest to him on account of the rather large number of cases that had come under his observation. When he stated at the last meeting of the State Medical Society, in 1892, that he had treated more than twenty-five cases since 1880, some surprise was caused by the statement. Dr. Matas was not able on that occasion to state the exact percentage of mortality or of recoveries because he had not yet tabulated and analyzed his cases, but he intended to do this fully in a future paper, and the results, he thought, would show a positive gain in the percentage of recoveries since the adoption of modern surgical methods. His ideas as to the prognosis of hepatic abscess had been positively changed for the better since his student days. When he was a resident student at the Charity Hospital thirteen years ago he had been impressed most unfavorably with the career of these cases, so that he had begun his practice with the conviction that the diagnosis of hepatic abscess was almost as bad as a patient's death warrant. The unfavorable results then were due in his opinion to the extreme conservatism of the times, which caused the practitioner to avoid an active surgical interference. The patients were treated in the medical wards and repeated aspiration with some modifications was the rule. The result was protracted hectic, increased loss of liver substance and final death from marasmus. Operation by incision, if performed, was always done late, after all other measures had been exhausted and the patient was reduced to the most unfavorable condition for true surgical interference.

He thought that he had met with all the classical and typical conditions of hepatic abscess and many others that were not typical. He had not met with an accident such as recorded by Dr. Bloch. In abscess which had not burst into the bronchi he thought irrigation was certainly indicated and free from bad consequences. In the liver it was not as in the pleural cavity, where injection with even sterilized water had been followed by disastrous and even fatal consequences. He could not be-

lieve that death had been caused in Dr. Bloch's case by the escape of some of the injected fluid into the peritoneum, because the accidental escape of the hepatic pus of tropical abscesses without fatal results had been recorded; especially had this been noticed by the French, who, in their recent and extensive experience in Anam and Cochin China, had learned to practise the early evacuation of hepatic abscess by incision, without waiting for adhesions to form.

He, himself, made it a practice to wash out the abscess cavity thoroughly, and for this purpose always endeavored to gain free access to the interior of the cavity by free incision. He has at present in one of his wards in the Charity Hospital a case of enormous abscess of the right lobe of the liver, which illustrates his usual practice. In this case a free incision was made in the right hypochondrium, which allowed a good inspection of the interior of the cavity and revealed an anfractuons surface lined with partially detached and disintegrating sloughs. During irrigation, with a hot dilute solution of peroxide of hydrogen (a hot solution of common salt is used very frequently), the interior was swabbed and scrubbed carefully with a large mop of absorbent cotton or sterilized gauze held in the bite of a long hysterectomy forceps. This served the purpose of a safe blunt curette. It is necessary to do more than simply evacuate the pus; we must scrub away the partially detached masses of sphacelated tissue that line the cavity and which can never be expelled by simple irrigation through a tube, unless this be by a long and wasting suppuration. In this particular case, there was a long history of protracted hectic, and dysentery.

The patient was marasmic to an extreme degree. Dr. M. even hesitated as to the propriety of any operation. Still he felt it his duty to give the man a chance, and as he appeared to stand the anæsthetic (ether) better than was anticipated, he treated the abscess in the usual way. The right lobe reached the crest of the ilium, and over three quarts of pus escaped through the abdominal incision. After swabbing the interior with a cotton mop the cavity was packed thoroughly with iodoform gauze (5 per cent.) saturated with an emulsion of iodoform and glycerine, 5 per cent. The external dressings consisted in a heavy layer of bichloride gauze covered with absorbent cotton and held in place by a broad roller-bandage. The patient rallied perfectly from the operation, much to the operator's surprise, but the dysentery returned, as frequently occurs in these cases, but was checked finally. Over three weeks have elapsed since the operation, and the abscess is becoming smaller every day; the appetite has returned; there has been no fever;

but in the last twenty-four hours a diffuse lymphangitis of the right foot and leg has set in which it is feared will alter most unfavorably the patient's prospects. Dr. Matas had tried the new antiseptic, *alumnal*, in this case. He was not dissatisfied with the iodoform emulsion which he always used in systematically packing the cavity, but he thought that he had here an excellent case in which to test the reputed pus-inhibitory properties claimed for this agent. The *alumnal* was used in glycerine solution (5 per cent.), with which the cavity was freely irrigated before packing. These irrigations were made daily for a week, and were perfectly well borne by the patient. There was no irritation, and Mr. Lovell, the interne of the service, who conducted the after treatment, was well satisfied with it, believing that the dressings were less soiled with its use than with solution; still it is difficult to estimate the comparative merits of a new agent in one case.

What Dr. Matas desired to emphasize most was the *early surgical* treatment of hepatic abscess, and by this he meant free incision, blunt curetting (scrubbing), irrigating, and thorough antiseptic packing. This is the ideal treatment applicable, because it converts an internal abscess into an open wound.

An incidental question is that of resection, or, rather, the recision of one or more ribs in order to gain free access to the cavity. This procedure should not be arbitrarily or unconditionally condemned. There are cases in which it is indicated, and others in which it is not. We should be guided by the condition of the abscess and of the patient. He recalled a case that came under his observation not long ago. The patient was a man from Honduras. He had a large dysenteric abscess of the right lobe, which pointed below the ribs. It was simply incised, irrigated, scrubbed and packed. One year after, the same patient came with another abscess, but this time it involved the convexity of the liver, and Dr. Matas was compelled to resect three inches of the sixth rib in order to open a free avenue into the cavity. The patient again recovered, and he did not have necrosis of the exposed ends of the rib, nor has this been noticed in any of his cases. In another case, which he treated with Dr. Veazie, the liver retracted under the ribs after a simple incision in the hypochondrium; and in order to pack the cavity thoroughly he resected four inches of the right costal arch and made thereby an osteoplastic flap which allowed a free exposure of the hepatic cavity. Dr. Matas is opposed to trephining the ribs, because it is easy to injure the intercostal vessels and nerves, and because unnecessary traumatism is caused thereby without the compensatory advantage of a sufficient opening. The ribs should be excised subperiosteally

with the periostotome. The soft parts may be easily peeled off from a rib by simply passing a strong strip of sterilized gauze under the rib and moving it backward and forward in the manner of a chain saw. The denuded rib may be excised with a costotome or bone-cutting forceps, or short saw, to any desired length.

Dr. Chassaignac said he wished to emphasize one or two points. The location of the abscess has to guide us in deciding upon a resection or not. The late Dr. T. G. Richardson was convinced of the importance of having a large opening. Dr. Chassaignac was formerly his student, and he had had a good opportunity of observing Dr. Richardson's methods. In one case he was not satisfied with trephining one rib, but he took out a piece of another. In this case it was easy to look into the cavity through the large opening and see large flakes of fibrin and pus attached to the walls of the abscess. Dr. Richardson passed in his finger and removed some sphacelated masses and flakes of pus that a stream of water could not dislodge. In those days gauzes were not much used. It was Dr. Richardson's custom to allow some of the antiseptic solution to remain in the cavity after irrigating it. He often closed the opening with bandages, which were renewed every day. Some of his cases made remarkable recoveries.

Dr. Bloch said that he did not deprecate irrigation of itself; he deprecated its use when there was a free opening into the bronchial tubes. While he was a resident student at the Charity Hospital he took notes on eight cases of abscess of the liver. In two cases the abscess was opened in the median line, a little below the ensiform cartilage: they got well. In the other six cases the abscess was seated in the right lobe; resection was resorted to and the patients all died.

Dr. Sexton said that the ribs and intercostal spaces vary in different individuals; in some persons the ribs are close together, in others they are far apart. The text-books advise, when the abscess has to be reached through the ribs to open between the sixth and seventh, or the seventh and eighth ribs in the axillary line. Here we can easily feel the ribs and judge of the width of the intercostal space. In his case, now convalescing, he felt that there was plenty of room, and he did not resect. He thinks it is bad surgery to resect where the intercostal spaces are wide.

Dr. M. J. Magruder didn't think it always necessary to resect a rib even when the abscess had to be opened above the lower border of the ribs, and mentioned three cases he had treated by simple free incision between the ribs, two of which made good recoveries, and the third is now under treatment

and doing well. In two of these cases more than a pint of pus was evacuated, and in the other about ten ounces. In none of these cases was the cavity packed. Two large drainage tubes were introduced and the cavity irrigated daily with a warm 10 per cent. solution of hydrogen peroxide. Two of these cases occurred in the same person, who had a third one opened just below and an inch to the right of the ensiform cartilage. One week after this third abscess was opened there was a profuse discharge of bile, which continued several days, but diminished as the cavity filled up and finally ceased, the patient making a good recovery.

Dr. Matas said that Dr. Sexton was in error in regard to danger of wounding the pleura while excising a rib. The danger of pneumothorax had been greatly exaggerated and this fear had been one of the drawbacks in attacking abscesses of the convexity. When the abscess involves the upper surface of the liver, the inflammation causes a diaphragmatic pleurisy, which, together with the rise of the diaphragm from the hepatic tumefaction, causes an early obliteration of the lower pleural pouch. When a knife is thrust through an interspace, it can not open the pleura because adhesions have caused a firm agglutination of the visceral and parietal layers. Godlee in his lectures on hepatic abscess, some years ago, showed that this was the condition. The incision should always be made below the line of dullness.

The size of the opening should be regulated by the size and depth of the cavity. In regard to the danger of allowing micro-organisms to enter with the atmosphere into the abscess cavity, he thinks it is far better to treat these abscess cavities by free and thorough evacuation of their contents and rely upon subsequent antiseptic packing than to allow the same micro-organisms to pass through a simple canula into an inaccessible cavity, where they may develop with impunity in the retained secretions and sloughs. Insufficient opening means sepsis; with the open method there is no hectic or sepsis.

Dr. Bruns said that he knows little practically about the subject, since his special practice has drawn him away from general surgery. He was contemporary with Dr. Matas in his student days at the Charity Hospital, when the treatment of hepatic abscesses was revolutionized. In those days the standard treatment consisted in aspirating with Dieulafoy's aspirator and then pumping a solution of carbolic acid back into the abscess-cavity with the aspirator in its unclean condition. Under this treatment, it was quite the proper thing for the patients to die, which they all did. The late Prof. Richardson is entitled to great credit for insisting on the abolition of this deadly treatment.

Dr. Matas said that as a matter of historical interest he would state that the first surgeon to resect a rib for thoracic abscess was the late Warren Stone, Sr. Dr. Richardson continued the practice and applied it first to the treatment of hepatic abscess.

EXHIBITION OF LARGE VESICAL CALCULI REMOVED BY
CYSTOTOMY.

Dr. Matas exhibited two large calculi which he had removed from the male bladder and which were interesting on account of their large size and of the contrast of the methods adopted for their removal. The first calculus (phosphatic) weighed 2 ounces, 3 drachms and 50 grains (troy) and measured $2\frac{3}{4}$ inches by $1\frac{7}{8}$ by $1\frac{1}{2}$. It was removed, together with a smaller concretion weighing two drachms, from the bladder of an old man aged 70 years, who came to his service in the Charity Hospital four years ago. A median perineal section was made and perineal lithotomy was attempted, but the lithotrite, a new and massive Bigelow, of latest design, broke while biting the stone without crushing it, and the attempt to crush had to be abandoned. After dilating the neck of the bladder (*à la Dolbeau*) with a long bladder (Tieman's) rectal dilator, and then incising each lateral half of the prostate, the large stone was delivered, though not without exercising considerable force in the extraction.

The patient, in spite of his advanced age and poor physical condition, recovered and returned home, but a certain degree of urinary incontinence remained.

The other specimen (also phosphatic) had been removed two weeks previously by supra-pubic section. It weighs 3 ounces, 4 drachms, 16 grains (troy), and measures $2\frac{7}{8}$ by $2\frac{3}{8}$ by $1\frac{1}{2}$ inches. The patient is a young man who has been much weakened by prolonged suffering. The man is now in the service of Dr. Matas, where he is making a rapid recovery. This stone is larger than the first, but the comparative ease with which this stone was extracted, and the simplicity of the operation and its consequences, formed an agreeable contrast to the difficulties of the first operation, and emphasized the superiority of the supra-pubic operation over the perineal route.

DEMONSTRATION OF "MURPHY'S ANASTOMOSIS BUTTONS."

Dr. Matas exhibited and demonstrated on an artificial intestine the application of the device recently contributed to intestinal surgery by Dr. J. B. Murphy of the Chicago Post-graduate School, and known as "Murphy's Buttons." This very ingenious invention had been described by the author in

the *North American Practitioner* of Chicago, November 1892, and in the *New York Medical Record*, December 10, 1892. Cholecysto-intestinal, gastro-intestinal, entero-intestinal anastomosis and approximation *without* suture could be secured by these remarkable "aids." The three sizes made by the manufacturers were exhibited and the simplicity of their application demonstrated. The only objection to these "aids," an objection which they have in common with all such contrivances, lies in the future possibility of contraction of the artificial fistula produced by them—the opening being amply sufficient, however, immediately after the detachment of the buttons. The remarkable clinical success of Dr. Murphy in the operation of cholecysto-enterostomy, usually a very difficult operation—technically speaking—was especially commented upon.

In addition to the danger of contraction, in future, of the artificial fistula created by the apparatus, there are other objections which more extensive experience and perfected technique may dispel, but which still remain as theoretical drawbacks. Among these should be mentioned the impossibility of separating the two buttons, once they are fully set and approximated; to separate them it would be necessary to pull them out bodily from the intestines, as they can not be easily screwed apart while in *situ*.

Owing to the folding and tucking up of the intestinal walls around the stem, of each button-half, it is possible that contact between the approximated surfaces may be imperfect and that, in consequence, fecal leakage may take place. A careful perusal of the recorded experiments by the author would convince one that this is indeed possible. It is possible also to cause premature sloughing of the compressed intestinal walls if the spring tension is too great. On the other hand, according to the inventor's experiments, the buttons may remain in *situ* nearly a month, which would be too long. During this time obstruction of the button canula could readily take place by fordo-impaction and a secondary operation might be required to get rid of the buttons.

AUGUST McSHANE, M. D., *Secretary*.

PHILADELPHIA ACADEMY OF SURGERY.

TWO CASES OF AMPUTATION AT SHOULDER JOINT IN WHICH WYETH'S PINS, TO CONTROL HÆMORRHAGE, WERE USED.

By JOHN H. BRINTON, M. D., Philadelphia.

Meeting April 3, 1893. The president, Dr. William Hunt, in the chair.

CASE. I.—Osteitis deformans of the leg, followed at the

expiration of twenty-three years by sarcoma of the humerus; amputation at shoulder joint by the oval method; use of Wyeth's pins to control hæmorrhage; death on the tenth day. E. B., aged 48 years; born in Massachusetts; publisher. About twenty-three years ago he noticed tenderness over the right tibia, increased by pressure, by severe or prolonged exercise, and by barometric changes. Various anti-rheumatic measures were employed, but without avail. The limb did not become much worse; he was able to be about and follow the business of his life for years. During this time he was not lame, but experienced a sense of weakness in the limb. To use his own expression, "he favored that leg." In the course of years the bones of the leg had gradually increased in thickness, and had become curved. About ten years ago he consulted the late Prof. Agnew, who told him that he could do nothing to relieve his slight disability of the limb, and that the affection was incurable. About three years since he consulted me, but I could add nothing to what had been already said, and could suggest no treatment.

In November, 1891, the patient consulted me for a fracture of the body of the left scapula. This resulted from a fall backward, as he was descending from the step of a railroad car, the scapula striking the edge of a projecting board or plank. This fracture healed rapidly and well.

In June, 1892, in jumping from a street car while in motion, and while his hand grasped the railing, he experienced great pain just below the right shoulder, and felt that the arm was broken. He came directly to my office. On examination, I detected crepitus, diagnosticated fracture of the anatomical neck of the humerus, and treated him for that injury. Union took place quickly, and full use of the limb was obtained. The only noticeable feature in this injury was the occurrence of slight pain referred to the outside of the humerus, about the lower portion of the upper third. There was at that time no enlargement of the bone at this locality.

On September 19, 1892, the patient again consulted me, stating that a "lump" had appeared on the outside of the humerus at its upper part. I examined the arm and found distinct cylindrical enlargement of the humerus, obviously a sarcoma of the bone, and I stated this to the patient, advising him to consent to the removal of the limb at the shoulder joint, if the diagnosis should be confirmed by a preliminary incision. At the patient's request, Drs. Packard and John Ashhurst saw the case in consultation, and they agreed with me in the propriety of immediate operation. From a careful examination of the patient's entire clinical history, there was no doubt in our

mind that the case was one of osteitis deformans, first described by Paget, and which had been followed, as is so often the case, by the development of a malignant growth.

The operation was fixed for October 5, 1892, but at the preliminary shaving of the axilla, and preparation of the limb, or by the patient's lifting of the limb, fracture, which may fairly be regarded as spontaneous and non-traumatic, occurred, as was made evident at the time of operation, done in the presence and with the assistance of Drs. Keen, Ashhurst, Packard, and others.

To prevent hæmorrhage, the long steel pins of Prof. Wyeth were inserted by Dr. Keen, the anterior one transfixing the anterior axillary fold in front of the vessels, penetrating the tendon of the pectoralis major muscle, and emerging near the end of the acromion.

The posterior needle pierced the deltoid and emerged just below the acromion. By carrying the needle, especially the anterior one, well upward, the constricting rubber band was placed so high as not to prevent the rotation of the humeral head, or to interfere materially with its disarticulation.

This patient suffered very slight loss of blood at the time of the operation, and received but little shock. He reacted promptly and perfectly, and for several days did well, the wound uniting throughout. On the night between the fifth and sixth day the temperature rose to 104.5 deg., and a copious eruption, similar to that of measles, appeared on the abdomen and chest, and eventually invaded the extremities, and indeed the whole body. There was marked coryza, and the tongue became brown and dry. This condition resisted all treatment and the free use of antipyretics. As the eruption spread, the temperature still rose, reaching 107.5 deg., and 108 deg., and the patient died on the afternoon of the 15th of October, the tenth day after the operation. The intellect remained clear until within an hour or so of the end.

I can not but regard the death as due to some form of septic infection not easy to determine.

It is unnecessary to add that the antisepsis was observed in the treatment before, during and after the operation.

The specimens, showing the sarcoma of the shaft of the humerus, and the peculiar indented fracture of its head and anatomical neck, are before this Academy. I particularly desire the observation of the Fellows to the fracture, which appears to me to have resulted from violent impact of an infiltrated diseased caput humeri against the edge of the glenoid cavity.

CASE II.—Amputation at shoulder joint for enchondroma of humerus.—The other case of shoulder amputation, in which

I used Wyeth's pins, was that of a boy (I. B.) from Vermont, ten years of age. Nearly a year previously a tumor, apparently an enchondroma, began to develop on the inner side of the humerus, close to the head of the bone. It eventually grew until it attained a diameter of two and a half inches. It was painless, but interfered with the joint-motion by its bulk. The boy was brought to the clinic of the Jefferson Hospital, and, after consultation with my colleagues, I determined to remove the arm at the shoulder.

This was accordingly done on the 28th of November, Wyeth's pins being first introduced by my colleague, Professor Keen. The anterior pin was made to emerge three-quarters of an inch above the tip of the acromion. As a result the circular turns of the tubing rested on a somewhat higher level than in the preceding case. Perfect freedom of the joint was preserved, and its disarticulation was not unimpeded. Previous section of the bone with the saw, as directed by Professor Wyeth, was not necessary. A roller bandage was applied as a compress under the tubing and directly over the artery. Hæmorrhage was thus perfectly prevented, and the removal of the limb, as in the former case, was practically a bloodless procedure. This boy recovered without accident.

I may state that in both these instances an Esmarch elastic bandage was applied previous to the insertion of the pins.

DISCUSSION.

Dr. William W. Keen—I would call attention to the control of hæmorrhage by Wyeth's method. This afforded perfect hæmostasis. I never saw anything better, and as compared with the method which I devised myself a few years ago, by a compress over the subclavian artery, I think that it is vastly superior. In the first of Dr. Brinton's cases the pins were brought out at the end of the acromion process, and when the head of the bone was removed the skin slipped down and the constriction of the tube partially obliterated the cavity where the head of the bone had been. In the second case the pins emerged three-fourths of an inch from the tip of the acromion, and there was no trouble from the slipping of the tube downward.

Dr. John B. Deaver—How much blood was lost in these cases?

Dr. Brinton—In the first case there was a little blood lost on account of the slipping of the rubber tube—perhaps two ounces. In the second case there was practically no blood lost.

Dr. Deaver—I have had no experience with the Wyeth pins in amputation at the shoulder joint. I have relied upon

good assistance and have never seen much bleeding. There is no doubt that the method described is an excellent one, and the only question in my mind was whether the presence of the tube did not interfere with the manipulation in disarticulating. In the few chronic cases on which I have operated all have recovered.

Dr. James M. Barton—Unless there is some tumor encroaching upon the joint, interfering with the manipulation, I am in favor of an assistant grasping the artery as the flap is divided. Some years ago I saw a case of large sarcoma of the head of the humerus perish from hæmorrhage on the table. The pins under such circumstances would have saved life.

Dr. W. W. Keen—I think that there is no possible doubt that the tube does not interfere with the manipulations, but that it assists us in making them. You have absolute confidence in your hæmostasis, which you can not have in any assistant whose arm or thumb is apt to get tired.

Dr. H. R. Wharton—I have not had any experience with Wyeth's pins in shoulder-joint amputation, but I can see how the method should be very useful, although I have not seen much bleeding where there have been good assistants. In my experience the most blood has been lost in the preliminary incisions. The only point would be in regard to the interference with the disarticulation if the tube slipped. I have seen Dr. Agnew use a pin under the vessels with a ligature above, which controlled the hæmorrhage very satisfactorily.

The President—Some years ago I used the Esmarch tube in the shape of a figure of eight in amputation at the shoulder joint with perfect success. An assistant held it up when there was any tendency to slip.

Meeting May 1, 1893. The president, Dr. William Hunt, in the chair.

INDIVIDUAL EXPERIENCE IN THE TREATMENT OF VESICAL CALCULUS.

By JOHN ASHHURST, JR., M. D.

I find in looking over my records that I have removed calculi from the human body in fifty-one cases. One case was that of a female child, on whom I performed lithectomy, or rapid dilatation of the urethra, but the remaining fifty were in male subjects. In thirty-five of these fifty cases the patients were operated on by lateral lithotomy, which is the cutting operation that I prefer. I recognize that there are cases in which the median operation is to be preferred, and that there are other cases in which the supra-pubic operation is the best, but where the surgeon has the choice of operation, I think that he should

select lateral lithotomy. Of the thirty-five cases operated on by the lateral method, twenty were in children under the age of puberty, and in every case the patient recovered. In males beyond the age of puberty, including a fair proportion of quite old persons, I have had fifteen cases with three deaths, but only one of these three was really the result of the operation. That occurred in a case operated on in a neighboring town this winter. Secondary hæmorrhage occurred on the ninth or tenth day, and the attempts made by the attending physician to control it were not successful.

I have six cases of the median operation, with one death, to report. In one case the operation was done for the removal of a foreign body, the end of a catheter. In this case I succeeded not only in removing the foreign body, on which there was a small calcareous deposit, but also in relieving the chronic retention of urine, from which the patient had long suffered, by tearing off the median lobe of the prostate with the forceps. This was fully ten years ago; the patient is still living, and I believe has not had occasion to use a catheter since. The case which proved fatal was in a patient in the last stages of cystitis and chronic renal disease, and in which the presence of the stone was simply a complication. An interesting feature in this case was that, in addition to the presence of a stone, there was a large quantity of that semi-organized material which has been described by Vandyke Carter as the animal basis of calculi.

I have one case of the supra-pubic operation, in which the stone was a small one, this particular operation being chosen because the case was really one of villous tumor of the bladder, and the presence of the stone was simply a complication. The patient was in a critical condition from hæmorrhage at the time of the operation, but made a good recovery.

I have no case of the old-fashioned lithotripsy. The operation had already come to be rarely practised before I had occasion to resort to the crushing method. The early portion of my practice was largely with children, and Bigelow's modification had already become the operation of preference when I first felt I had a case adapted to its performance. I have performed this operation eight times, with six satisfactory recoveries and two deaths. Both the deaths were from uræmia, dependent upon chronic disease of the kidney.

I have brought here a number of the calculi which I have removed. The largest weighs three ounces and some drachms. It was removed by the ordinary lateral operation. It was not necessary to enlarge the wound by dividing the right side of the prostate, nor was it necessary to crush the stone. By

making a large external wound, by grasping the stone with sufficiently powerful forceps, and by patience in manipulation, stone was removed without difficulty, and the patient made an excellent convalescence.

The largest number of stones which I have removed from one patient is fifty-four. These were removed by lateral lithotomy. The patient made a good recovery, but returned in a year or so with recurrence of the symptoms from a descent of more stones from the kidney. On that occasion I determined to perform the operation of litholapaxy. The patient did pretty well for a few days, but then the urine became turbid, containing a large quantity of ropy mucus and pus, uræmia developed, and the patient died in convulsions. This was a forcible illustration of the risk attending litholapaxy in cases of cystitis, and since the occurrence of that case I make it a rule, where the patient presents cystitis in an advanced degree, to recommend the cutting rather than the crushing operation.

With regard to the results that I have reached from my own experience, I would say, in the first place, that I have never seen any reason to wish for a better operation than lateral lithotomy in children. Litholapaxy has been resorted to successfully a number of times, and with the improved instruments which we now have the operation is a feasible one, while it could hardly be considered such a few years ago. Until within a short time it has not been possible to get instruments of sufficient strength and delicacy for use in the urethræ and bladders of children. Even now, the operation of litholapaxy in children seems to me to be a more severe one than lithotomy. The results of cutting for stone in children are so satisfactory that I think we want nothing better. The great advantage of litholapaxy, it seems to me, is the short time required for after-treatment. If all goes well, litholapaxy will allow the patient to go about his business in five or six days. This is a great advantage in adults who are engaged in active business; but in young children is a matter of no importance. At the same time I am willing to admit that the operation has been improved to such an extent that it is one that may be legitimately resorted to in children if the surgeon thinks that it is preferable.

The median operation seems to me to have a very limited field. Cases of foreign body in the bladder, and cases of very small stone, are those to which this operation is adapted. In some of my cases the operation was not begun with the knowledge that a stone was present, but for retention of urine where it was not possible to pass an instrument by the urethra. The argument which has been advanced in favor of this operation,

that it is attended with less risk of hæmorrhage, does not seem to be entirely well founded. There is very little more risk in the lateral operation. The transverse perineal artery is divided, but with a little care it is not likely that the internal pudic or the artery of the bulb will be injured. In the old days of operation without an anæsthetic, it was quite possible that one of these arteries might be wounded in the struggles of the patient. The artery of the bulb can be avoided by striking the staff as far back as possible. The hæmorrhage from which I have had trouble has been from the prostatic plexus of veins, and this is quite as likely to occur in the median as in the lateral operation, and, indeed, I have seen very profuse hæmorrhage from this source after median section.

The supra-pubic operation, although just at present the fashionable method, I should reserve for very large stones, or for cases in which there was some complication, such as tumor, in addition to the stone. Cases of vesical tumor are more satisfactorily dealt with through the supra-pubic incision, but where the case is an uncomplicated one of stone, I have not seen any reason to prefer this to the lateral method.

In the female, the operation of lithectomy or rapid dilatation is the one to be chosen, and in almost all cases will be sufficient. Mr. Bryant has shown that stones of considerable size can be removed by this method. In children, stones up to half an inch in diameter, and in adults stones up to one inch in diameter, can be thus removed. If the stone is larger, it can be broken into several fragments before removal. I believe that the results of this method will be more satisfactory than if an attempt is made to remove the calculus by litholapaxy or by any form of lithotomy. The vesicovaginal section may leave a permanent fistula. The high operation may, of course, be required for very large stones.

As regards the operation of lateral lithotomy, the points which are to be observed are, in the first place, to make a large external wound. I have seen very serious trouble result from too small an external incision. There is no objection to a large wound through the skin and superficial fascia; if hæmorrhage occurs, it is easier to deal with it through a large wound, and drainage is more satisfactorily effected. In the second place, I think that it is of great importance to strike the staff as far back as possible. Instead of striking it where it is most superficial, I endeavor to get as far back toward the horizontal portion of the staff as possible. In that way you avoid wounding the artery of the bulb, and obtain plenty of room where it is needed. My preference is to have the staff firmly hooked up under the pubis, instead of having it made to project in the perineum. I

believe that in this way it is more firmly held, and that the surgeon can fix the position of the anatomical points better, and therefore cut with more precision. Having struck the staff, I think, following the advice of Sir William Fergusson, that the deep incision should be made small. I believe that there is a decided advantage in this plan. I do not say that the surgeon should not make the wound in some degree proportionate to the size of the calculus, and in cases where there is a large stone, I am in the habit, as I withdraw the knife, of bringing it slightly away from the staff so as to enlarge the deep wound. In children, the knife should be withdrawn in close contact with the staff; but in the adult I drop the knife a little, so as to enlarge the wound in the prostate. The finger is then introduced, and the prostatic enlargement completed by dilatation. I do not at all agree with the view of Mr. Teevan, that it is safer to cut the prostate than to stretch it. In the introduction of the finger, I lay stress on its introduction above the curve of the staff. In children this is very important, for if it is not done, the finger may not enter the bladder, but may pass into the recto-vesical space. The surgeon can not miss the bladder if he passes the finger above the staff, as it is well held up under the pubis.

In my earlier operations I had a great fancy for the scoop in removing calculi, using it as the obstetrician uses the vectis, getting the scoop behind the stone and the finger in front of it, and bringing all out together. Of late years I have used the forceps more and the scoop less, although at times it answers a useful purpose. In the withdrawal of the stone, a mistake that I have often seen made is in not carrying the forceps far enough backward toward the coccyx. The portion of the wound where there is plenty of room is far back. I have seen surgeons try unsuccessfully to remove the stone through the anterior portion of the wound, when it could have been readily removed if the forceps had been dropped toward the back.

In the high operation, it is a great advantage to have the bladder and the rectum distended, though, perhaps, not absolutely necessary. There is an advantage, too, in lateral lithotomy, in having a moderate quantity of fluid, say about four ounces, in the bladder before the operation, as the gush of water, when the bladder is opened, will bring the stone down on the end of the finger. If, however, the bladder is intolerant, I do not care to have it much distended.

With regard to the operation of litholapaxy, the points which I consider to be of importance are, in the first place, to crush the stone as thoroughly as can be done, and then, when using the evacuator, to make the stream enter with great gen-

tleness. I believe that cystitis may be aggravated or even caused by using too much force. As regards the rapidity of the operation of litholapaxy, I have no doubt that an operator will do it with greater rapidity as he does it oftener, but for my own part I have found it a slow operation. I think that no surgeon should undertake it who is not prepared to give as many hours to it as may be necessary. I can recall three cases in the practice of other surgeons in which the patients died as the direct result of having a stone left half crushed in the bladder. Violent cystitis came on and the patients succumbed. Where the operation is undertaken, it should be completed. If the surgeon is not prepared to remove the entire stone at one sitting, he should not undertake the operation at all. This is the operation for small stones in patients with healthy bladders. Cystitis is the most dangerous condition in which to resort to litholapaxy. In the case of an adult presenting himself with stone, my first thought is of litholapaxy. I then consider the various circumstances in the case. Litholapaxy has so many advantages in cases to which it is adapted, that I think it should be the surgeon's first choice.

With regard to the objection that lateral lithotomy may render the patient sterile, I do not see why that should be, provided that the operation is confined to one side of the perineum, and that no undue amount of inflammation follows. If there were a great deal of inflammation, it is quite possible that there might be such obstruction of the vas deferens as to prevent the patient from generating with the testis of that side, but there is no more reason why the patient should be rendered sterile by the operation of literal lithotomy than by the removal of one testicle. In the immense number of operations performed in former years, we never heard of this objection, and I believe that it is rather theoretical than practical.

I have had one case of stone weighing less than two grains, which I diagnosed by the sound, and removed by lateral lithotomy. The patient was a lad who had the symptoms of stone in the bladder, and in addition, frequent attacks of sudden and complete retention of urine, due to the calculus entering and plugging the internal meatus. The straining was so excessive that, in the effort to pass water the night before the operation, the patient ruptured sub-conjunctival vessels in both eyes.

I wish to refer to a few cases of cystotomy for other causes than calculus. I do not include cases where I have operated by Sir Henry Thompson's method of puncturing a contracted bladder above the pubis. I find that I have opened the bladder by cystotomy in eight cases, six of these being cases of cystitis. Of these six, four recovered and two died, as the result of the

diseased state of the urinary organs. In two instances I have opened the bladder for intense pain in the act of micturition, due to a fissure at the neck of the organ. Both patients recovered. In one case the fissure followed cystitis, the result of gonorrhœa, and in the other case, the symptoms came on after the use of very large sounds.

I have had one case of cystotomy in a child for tuberculous disease of the bladder. This case was of a good deal of interest. The patient had, at one time, been under the care of the late Professor S. D. Gross, who had sounded the child, and said that he felt a stone. It is to be observed, however, that he never appointed a time to operate, so that it is possible that he may have had some doubts as to the diagnosis. A curious feature of the case was that the father, who was a man of considerable intelligence, declared that he had himself distinctly heard the click of the stone against the instrument. I sounded the child, but was not entirely satisfied that a calculus was present, although, from the history, I thought it probable. The child had all the usual symptoms of stone, except sudden arrest of the urine. I asked Dr. Forbes to see the case with me, and we thought it right to open the bladder. No stone was found, but there was discharged twenty or thirty little bodies which I presume were what the older surgeons would have spoken of as fibrinous calculi. They looked like little pieces of catgut. Whether these were masses of tuberculous material, or of inspissated mucus and lymph, I do not know. The patient was relieved of his symptoms, but died two months afterward of tuberculous disease of the mesenteric glands.

DISCUSSION.

Dr. John B. Deaver—I was glad to hear Dr. Ashhurst refer to advanced Bright's disease and cystitis as contra-indications for litholapaxy. I have been struck with the fact that concussion of the bladder walls during the washing out of the fragments must be an exciting factor in producing an uræmic condition when there is disease of the kidneys. I recall one case operated on by one of the older surgeons, where uræmia occurred within twenty-four hours after the operation. I have known of one or two such instances. In other cases, apparently similar in character, lithotomy has been performed, and no trouble has followed. There is no doubt there is some connection between the operation of litholapaxy and uræmia. In the cases where I have performed the operation, I have had a careful examination of the urine made to exclude cystitis and chronic affections of the kidneys before operating, in addition to making the other tests familiar to you all.

Dr. H. R. Wharton—In regard to litholapaxy in children, my experience is limited to one case, which was that of a child six years of age. The operation was quite tedious. I think that it took at least an hour to remove not a very large stone. The child stood the operation very well, and at the end of the fourth day the urine was perfectly clear and child was out of bed.

A CASE OF DIPHTHERITIC CROUP IN WHICH A TRACHEOTOMY-TUBE WAS WORN FOR SIXTY DAYS.

By H. R. WHARTO, M. D.

On December 20, 1892, I saw a child 18 months of age, who was suffering from diphtheria, who exhibited marked symptoms of dyspnœa. I introduced an intubation tube which relieved the dyspnœa, but at the end of fifteen hours this was coughed up, and I was summoned to see the case again, and found that the dyspnœa had returned. I then performed tracheotomy, and after the operation the dyspnœa was entirely relieved, and the patient subsequently did well.

On the tenth day after the operation the tracheotomy-tube was removed and the patient breathed comfortably, but in fifteen or twenty minutes after the removal of the tube the dyspnœa rapidly recurred and became so urgent that I had to replace the tracheotomy-tube.

Attempts were again made to remove the tube at intervals of a day or two for a week or more with a similar result. Four weeks after the operation the child was etherized and the tracheotomy wound was dilated, so as to expose the wound in the trachea. It was then found that there were a number of masses of granulation tissue springing from the trachea in the region of the tracheal incision; these were removed with forceps and scissors, and the tracheotomy-tube was again introduced. After waiting a few days another attempt was made to remove the tracheotomy-tube, but this also failed. An intubation-tube was introduced upon the removal of the tracheotomy-tube, and was worn for some hours, and upon its removal the child was able to breathe comfortably for five hours; but after this time dyspnœa recurred, and the tracheotomy-tube was again introduced. After several trials of the intubation-tube, it was finally abandoned, and it was decided again to etherize the patient and examine the tracheal wound, fearing the granulations had recurred. The patient was etherized and the tracheotomy wound was enlarged so as to expose the tracheal wound, and it was found that a number of masses of granulation tissue were present; these were removed with forceps and scissors, and their bases were touched with the solid stick of nitrate of silver. An intubation-tube was then intro-

duced, and it was worn for twelve hours, when it was coughed up. Thinking its expulsion was probably due to the irritable condition of the larynx and trachea, resulting from the recent operation, I waited forty-eight hours and then replaced the intubation-tube. To keep the tracheotomy wound open, so that the tracheotomy-tube could be introduced, if it were required, I introduced an obturator into the tracheotomy wound. The intubation-tube was worn for four days and was then removed, and the obturator was retained in the tracheotomy wound for three days longer, and was then removed. The child after this time had no further difficulty with his breathing, and the tracheotomy wound, after the removal of the obturator, rapidly contracted and healed. The patient wore the tracheotomy-tube for a period of sixty days.

A CASE OF INTUBATION OF THE LARYNX, IN WHICH THE TUBE
WAS WORN FOR FIFTEEN DAYS.

On February 24, 1893, I saw, with Dr. H. M. Fisher, an Italian child less than two years of age, who was suffering from marked dyspnœa, which had come on gradually in the previous forty-eight hours. I introduced an intubation tube in this case, which completely relieved the dyspnœa, but it was coughed up in twenty-four hours, and the next larger tube was introduced. On the third day, the tube was removed and the child breathed comfortably for half an hour, but after this time the dyspnœa gradually returned and the tube had to be reinserted. Another attempt was made on the sixth day, and the tube was kept out for three hours, and after this time the dyspnœa recurred and I was compelled to reintroduce the tube. Attempts to remove the tube were made at intervals of two days, with a like result, and it was only on the fifteenth day that the tube was permanently removed.

In this case I noticed in each removal of the tube that there was little expectoration of mucus or membrane and that the cough was croupy, and it was observed that at the time of the final removal of the tube that the cough was loose.

In all acute cases the patient is usually able to dispense with the intubation-tube in from five to eight days; this case wore the tube for fifteen days, the longest period in my experience that an intubation-tube has been required.

TWO CASES OF EXCISION OF THE HIP JOINT FOR COXALGIA.

1. Harry O'Neill, aged 7 years, was admitted to the Children's Hospital April 27, 1892, having suffered from coxalgia for two years, and been under treatment in three different hospitals before he was sent to the Children's Hospital. When

he came under my care there was a sinus on the outer aspect of the thigh which discharged profusely, and he had the scar of an incision which had been made for drainage, upon the anterior surface of the thigh over the hip joint.

On July 5, 1893, as the patient had suffered some time with a high temperature, and as he was rapidly losing ground, I decided to excise the hip joint, and upon exposing the joint I found the head of the femur separated and represented by a small irregular sequestrum, and the neck of the femur had undergone marked absorption; the acetabulum was roughened, but not perforated. The patient did well after the operation; the wound healed promptly and he was sent to the country branch in two or three weeks after the operation.

I show the patient, ten months after the excision of hip joint, and you see he has a very firmly healed wound and a very good range of motion at the false joint; his general condition is also excellent.

2. Charles G., aged 11 years, suffered from coxalgia when eight years of age; was treated at the Children's Hospital as an out-and-in patient for several years, and finally his condition became so bad by reason of the free discharge from sinus in connection with the hip joint, and from his continued high temperature, that excision of the hip joint was decided upon. The joint was excised in June, 1891, and the patient had a slow convalescence, but finally the wound healed, and the patient's general condition improved.

I show him to-night, nearly two years after the operation, and you see that he has a remarkably free range of motion at the false joint, and his general condition is excellent.

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COLLABORATORS:

DR. F. W. PARHAM.

DR. H. W. BLANC.

DR. A. W. De ROALDES.

DR. R. MATAS.

Editorial Articles.

THE STATE MEDICAL SOCIETY.

It is with great pleasure that we again chronicle a meeting of the Louisiana State Medical Society that may be characterized as a success. The attendance was greater, the report of membership showed a decided increase, and there seemed to be an awakening to the importance of having a strong, well organized State society. The efforts of the retiring president, Dr. J. B. Elliott, in the way of obtaining new applications for membership, met with a generous response; still there are many physicians in the State who are not yet within the fold, and already our present president, Dr. A. B. Miles, has devised, and commenced to carry out, a systematic and sustained campaign with a view to increasing the membership of the society by constantly keeping it before the eyes of all of the physicians of the State. The leaven has already begun to work, and at the next meeting, in 1894, we hope to see at least half, if not more, of the twelve hundred and more physicians in Louisiana enrolled as members of the State society. The society has passed through years of trial and

darkness, but the new spirit that seems to be growing gives promise of a bright and early dawn.

It is to be regretted that the literary feature of the meeting did not keep pace with the controversial part. Whenever any subject was brought up that called for a debate, as, for instance, the Medical Practice Bill the attendance was always large and the debate prolonged, and sometimes interesting. Physicians are not always good parliamentarians, and Louisiana physicians do not form a brilliant exception to the rule. Much valuable time was spent, if not wasted, on matters that could have been attended to in committee. About two hours of valuable time were positively wasted in haggling over the amount of honorarium to the secretary. If a time-limit were placed upon debates of certain questions, it might save from disappointment those physicians who suppose that a medical society should devote more of its time to medical matters and less to trifles that a committee could dispose of.

The appointment of the Committee of One Hundred to look after the Medical Practice Bill insures the active interest of progressive and representative men in all parts of the State. The committee is composed of the following gentlemen:

Committee of State Medicine and Legislation—I. J. Newton, chairman; T. Y. Aby, Monroe; T. J. Allen, Shreveport; R. F. Benson, Pelican P. O., Sabine; E. F. Beall, Coushatta; J. H. Bemiss, New Orleans; F. R. Bernard, Lake Providence; C. T. Bickham, New Orleans; R. U. Borde, New Orleans; O. T. Brown, St. Gabriel; G. McD. Brumby, Delhi; H. D. Bruns, New Orleans; T. J. Buffington, Baton Rouge; R. M. Littell, Opelousas; S. E. Chaillé, New Orleans; C. Chassaignac, New Orleans; P. F. Choppin, ———; J. T. DeGrange, New Orleans; A. W. de Roalde, New Orleans; D. W. L. Dickson, Shreveport; L. T. Donaldson, Bonnet Carre; C. T. Ducoté, Cottonport; J. W. Dupree, Baton Rouge; C. A. Duval, Houma; J. C. Egan, Shreveport; J. B. Elliott, New Orleans; T. G. Ford, Shreveport, F. Formento, New Orleans; D. R. Fox, Jesuit's Bend; A. G. Friedrichs, New Orleans; T. J. Galbieu, Natchitoches; A. S. Gates, Franklin; O. Gaudet, St. Patrick; J. B. C. Sazzo, Raceland; A. Given, Mandeville; B. Guilbeau, Grand Coteau; J. D. Hanson, Donaldsonville; T. J. Harrison, Montgomery; E. M. Hooper, Wilson; Jas. Jones, New Orleans; J. A. Johnston, Alexan-

dria; F. J. Kearney, Plaquemine; W. Kelly, Tallulah; R. Kilpatrick, Cheneyville; L. G. LeBeuf, Gretna; James Leake, Bayou Sara; F. Loeber, New Orleans; A. A. Lyons, Shreveport; G. A. Martin, Mandeville; R. Matas, New Orleans; F. J. Mayer, Quarantine Station; S. F. Meeker, LeCompte; G. P. Minville, Jeanerette; W. M. Lowe, Algiers; F. S. Mudd, Lafayette; J. C. Munday, Lake Charles; S. R. Olliphant, New Orleans; W. G. Owen, White Castle; C. D. Owens, Eola; A. McShane, New Orleans; A. J. Perkins, D. S. Perkins, Sulphur City, Col.; P. S. Postell, Plaquemine; G. K. Pratt, New Orleans; S. B. Pugh, Napoleonville; G. W. Remmage, Jennings; T. B. Rider, Morgan City; R. L. Randolph, Fairmont, Grant parish; L. Sexton, New Orleans; B. R. Saltor, Alto; C. L. Seemann, New Orleans; R. W. Seay, Pilcher's Point; J. B. Shelmire, Port Hudson; C. M. Smith, Franklin; C. S. Stewart, Amite; W. R. Satterlin, Mansfield; T. W. Tarleton, Pattenville; J. S. Thibault, Lockport; F. M. Thornhill, Arcadia; J. D. Trahan, Lafayette; W. D. White, Abbeville; C. K. Wilcox, Gansville; J. H. C. Wise, Morgan City; P. E. Archinard, New Orleans; J. L. Taylor, Tangipahoa; A. L. Metz, New Orleans; C. L. Robinson, Lake Charles; J. J. Ayo, Raceland; A. W. Jones, Jones P. O., Morehouse; J. E. Duffel, B. A. Colomb, Settoon, A. A. Allain, E. M. Bourg, R. A. Gray, O. R. Grube, J. D. Hargrove.

THE NEW MEDICAL COLLEGE BUILDING.

Last month witnessed the laying of the corner stone of the new building for the Medical Department of Tulane University of Louisiana. The new college is a handsome and commodious structure, and is quite an ornament to the city. This valuable addition to our teaching facilities is due to the munificence of Mrs. T. G. Richardson, whose gift of one hundred thousand dollars was noted in *THE JOURNAL* at the time of its donation. In our "State News and Medical Items" will be seen an account of the dedication ceremonies, and a description of the building.

Dr. L. F. Raynaud, of New Orleans, has been appointed Professor of Materia Medica and Therapeutics in the Medical Department of Tulane University, of Louisiana. Dr. A. B.

Miles has been transferred from that chair to the chair of Surgery.

We are pleased to learn that Dr. R. Matas, of this city, has been invited to deliver an address before the Post-Graduate School, of Chicago. The doctor will speak in August, on "Traumatism and traumatic aneurisms of the vertebral arteries."

Abstracts, Extracts and Annotations.

SURGERY.

CANCER OF THE TONSIL TREATED BY LACTIC ACID.

By E. FLETCHER INGALS, M. D., Chicago.

G. R., a man, aged 59, came to me the 13th of July, 1891. He stated that about a year previously he began to be annoyed by an excessive quantity of mucus in the throat, and a sensation of an unusual enlargement or lump which interfered with swallowing. He experienced pricking sensations in the parts at times. The trouble had been steadily growing worse during the six months immediately preceding his visit. His strength was good, but he had lost eighteen pounds in flesh, though his appetite and digestion remained fair. No hereditary or other cause could be assigned for the affection.

Upon examination of the throat, the diseased right tonsil was found fully four centimeters in diameter, with thickening extending from the gland to the anterior pillar of the fauces and the uvula. The diseased tonsil could be felt externally, but the cervical glands were not involved. I learned that this enlargement had all taken place within the previous few months.

Diagnosis.—Sarcoma of right tonsil.

Treatment.—A week later the entire gland was removed with the steel wire *écraseur* and the thickened uvula was at the same time taken off. The wound had nearly healed in three weeks, and I did not see the patient until about a month later, when he returned, complaining of a peculiar taste from the

secretions in the throat. I found that the wound had healed, excepting a small spot six to ten millimetres in diameter, but new deposits had taken place at the site of the tonsil, forming a tumor about fifteen millimetres in diameter by six or eight in thickness.

To the ulcerated portion of the growth I applied a 60-per-cent. solution of lactic acid, and the patient was given a weak solution of carbolic acid to use as a gargle. Similar applications were made every three or four days for about three weeks, with the effect of improving materially the appearance of the surface of the ulcer, which shortly after completely healed; but at this time thickening was noticed back of the posterior pillar in the right side of the pharynx, which rapidly increased in size until at the end of three weeks it measured about eight millimetres in thickness by ten in width and thirty in length. He suffered in the meantime some severe neuralgic pains, radiating from the tumor to the ear and side of the neck. There being no possibility of removing this thickened mass, it was injected with five minims of a 20-per-cent. solution of lactic acid. At this time and for some weeks later profuse bleeding followed each injection. The strength of the solution was gradually increased to 60 per cent. of the acid, but this latter proved too strong, and two or three times occasioned sloughing, though the abscess formed would heal kindly. Subsequently the strength of the solution was reduced 50 per cent. of the acid, and from eight to ten minims were injected in one or two places about three times a week, with the result of speedily diminishing the size of the indurated mass into which it had been thrown. The cancer, however, progressed, affecting the base of the tongue, the side of the pharynx, and the right side of the larynx, at times causing much difficulty in deglutition and often a good deal of pain; but the injections would reduce it, each time apparently causing the disappearance of a mass of the growth six or eight millimetres in diameter. By following up this plan until the present time the disease has been kept so far in check that the patient has been able to swallow with comparative comfort most of the time, and has had no difficulty in respiration, the condition now, ten months after the first injection, being but little worse than it was at that time, excepting that the disease has extended slightly to the cervical glands. During the progress of the treatment masses the size of a large filbert have been frequently caused to disappear in a few days.

The free bleeding which, during the first three or four months, usually immediately followed the injection has not occurred lately, and no sloughs have formed when a solution not

more than 50-per-cent. strong has been employed. In all cases where sloughs have been produced the cavities have healed readily with one exception; in this a small opening remains, but the surface has healed.

The injections have always been made deep into the tissues and have sometimes given very considerable pain, which has lasted in some instances for several hours, but on the whole, the amount of suffering has not been great. On several occasions when the disease was spreading rapidly in the base of the tongue or in the pharynx, three or four injections have reduced it again almost to the normal condition. The patient has experienced considerable inconvenience from the injected solution running out of the opening as the needle was withdrawn, or from the needle having been thrust into a cavity, formed by some former injection, which communicated with the surface so that the acid would run down to the larynx and cause severe coughing and spasm of the glottis; but these spasms have always disappeared in a few seconds.

To-day the patient's general health and strength remain good. He seems to have lost but little if any in flesh, and I feel satisfied that his life has been prolonged for several months, though gradual extension of the disease beyond the reach of my hypodermic needle warns me that a time is coming when my efforts will prove futile. The injections into the base of the tongue and larynx have been made by means of a hypodermic point soldered into a firm bent brass nozzle about four inches in length, which was attached to an ordinary hypodermic syringe. Usually from six to twelve minims of a solution varying in strength from 35 to 50 per cent. have been employed at each sitting, and on a few occasions, where considerable pain was caused or expected, a small amount of cocaine has been added to the solution.

I have followed the injection of the acid immediately by a spray consisting of morphine, gr. iv; carbolic acid and tannic acid, \AA gr. xxx; glycerine and water, \AA f dr. iv, with the effect of materially reducing the pain caused by the injections, lessening the hæmorrhage, and thoroughly disinfecting the throat.

Though the treatment of this case has not been curative, it suggests the possibility of retarding the growth of cancerous tumors not accessible to the knife by the use of interstitial injections of lactic acid. I hope that others will try it in similar cases, and also for the reduction of glandular enlargements. I would recommend that whenever used beneath the skin the amount should not exceed ten or fifteen minims of a solution of from 20 to 45 per cent. of the acid.

The needle used for the purpose should be cleaned with alcohol, and it is well to have a small amount of some light oil, such as liquid albolene, drawn through it, directly afterward, to prevent rusting.—*N. Y. Medical Journal*.

THE TREATMENT OF SEROUS AND PURULENT DIFFUSIONS INTO THE PLEURAL CAVITY.

By J. P. CRAWFORD, M. D., Davenport, Iowa.

It is not my purpose in this brief paper to more than report a number of cases coming under my management and mention the treatment carried out. We are all familiar to some extent with the processes leading up to the production of effusions into the pleural cavity. It is difficult to anticipate this complication, but very necessary to recognize it early and manage the situation judiciously.

CASE I.—G. A., male, aged 17, came to my office complaining of having had a long siege of pain in the right side and difficult breathing, but not sick enough to take to bed. Examination revealed the presence of effusion in the right pleural sac crowding the lung. The hypodermic needle passed between the ribs withdrew serous fluid. A quart of this exudate was removed by aspiration, resulting in pleasant relief and uninterrupted recovery, and for years he has been healthy.

CASE II.—Male, aged 56, had a tuberculous history, and for some months had been an invalid. He was suddenly seized with dyspnœa and serious cardiac disturbances. The mixed history made the diagnosis obscure, but the exploring needle cleared up all doubt, and the withdrawal of more than a quart of serous effusion of hæmorrhagic character relieved the urgent symptoms and facilitated a cure of the pleurisy, and greatly improved his general health.

The next case exceeds anything on record, so far as I have been able to find in medical literature, as to the number of aspirations, quantity of effusion withdrawn, and persistent refilling of the sac enveloping the left lung. The patient was 61 years old. For several months he had been losing weight, evidently from some more than ordinary disorder of nutrition. He was unable to lie in bed. When I first saw him, on account of difficult breathing, his dyspnœa was so great that he had to be fanned day and night to assist him in his fight for breath. On examination of the chest the heart was found pushed over, with the apex beat under the right nipple. The

intercostal spaces of the left side were bulged, the percussion note was dull, even flat, and vocal fremitus totally abolished. A hypodermic needle inserted withdrew serous effusion strongly stained with blood. The diagnosis at this stage of the case lay between a tuberculosis or cancerous condition as the seat of the trouble. The absence of the physical signs of the former and lack of pain, and rare occasion of the latter disease in the lung or pleura, left the etiology not clearly defined. However, we did not wait longer to verify the predisposing causes in the case, but without delay withdrew by aspiration ten pints of bloody effusion to save the patient from collapse, which was imminent from the encroachment of the fluid upon the lungs and heart. This ameliorated the distressing symptoms, and made the patient comparatively comfortable. But the refilling of the pleural cavity was so rapid that during the next twenty weeks I aspirated him on an average once a week, taking from three to ten pints at an operation of fluid of the same consistence, making twenty-one operations in twenty weeks, aggregating by measure over fifteen gallons of bloody fibro-serous exudate from the pleural sacs covering the left lung. During the latter part of this period pronounced indications of the presence of cancer became manifest, and, on autopsy, the collapsed lung was found to be so thoroughly contracted and infiltrated with cancerous deposit that it was not larger than one's fist. Large areas of the pleural surface in proximity to the nidus of deposit were broken down by ulceration.

The next is a case of empyema, and is especially interesting to me on account of the delightful recovery, although it was of purulent effusion into the pleural cavity instead of simple serous exudate. Katie G., aged 6, May 7. She was taken with double croupous pneumonia; temperature, 105 deg., and corresponding exaggerated symptoms. A painful pleurisy complicated the left lung. As the case progressed it was watched with serious apprehension. While the right lung cleared up favorably, the left side was slow and retarded. A considerable elevation of temperature prevailed, and the closest attention to stimulation and supportive measures was necessary to keep up the vital forces. During the fourth week there were pronounced symptoms of septic absorption from some source, and also evidence suggestive of accumulation of exudate into the left pleural cavity. The exploring needle proved this exudate to be pus. The disturbance to the breathing necessitated its immediate removal. Nearly a pint of creamy pus, found to be heavily loaded with pneumococci under the microscope, was aspirated and the cavity washed

out with an antiseptic solution. But this was not found sufficient, and one week later, after chloroforming and carefully disinfecting, I made an incision an inch long between the ribs, low down in the axillary line, and a drainage tube, of twice the size of a lead-pencil, six inches long, well perforated, was pushed through the opening, and lay across the dependent portion of the sac. The tube drained freely into a dressing of antiseptic gauze. The septic symptoms quickly subsided. For eight weeks I kept the tube in, gradually withdrawing it, and a few days later the wound closed up entirely.

The operation of thoracentesis is not a dangerous or mischievous one if conducted intelligently and with careful antiseptic precautions. The technique I follow out, in brief, is as follows: The hands, surface of the body, and all instruments are made thoroughly antiseptic. A few drops of 4-per-cent. solution of cocaine are injected into the skin, then into the muscles at the site of operation, which prevents all pain as the operation proceeds. A large needle attached to the vacuum bottle is plunged through the intercostal space at this time, and the exudate drawn off till a faint feeling is experienced of a spasmodic cough, which indicates that the lung is incapable of further expansion, when the needle is quickly removed with suction force still applied to prevent entrance of air into the cavity. This operation should be resorted to as soon as the circulatory apparatus is being especially disturbed or there are signs of threatened cardiac failure, whether there is difficult breathing from much or little effusion. There is, however, sometimes great damage done by excessive pressure in the absence of dyspnoea or other urgent symptoms, which danger should not be overlooked. Neither should the necessity of a subsequent operation be lost sight of, for we should bear in mind that the cavity will refill as long as the membrane is in the same condition to secrete. While the removal of the liquid facilitates the toning up of the inflamed secreting tissues, undoubtedly the greatest advantage of this surgical interference is the mechanical relief afforded by relieving the pressure as a conservative measure in preserving the vital organs. The same conditions apply in empyema as in simple pleurisy, only that in this instance we have an exudate composed of pus, with the additional danger of septic absorption. Effusion of this consistence undoubtedly contains dangerous elements of infection, and no time should be lost in making a free incision and thoroughly draining as long as there is any discharge.—*New York Medical Journal*.

MEDICINE.

ARTERIAL TENSION IN ANGINA PECTORIS, AND ITS THERAPEUTICAL INDICATIONS.

By P. WATSON WILLIAMS, M. D. LOND, Assistant Physician, Bristol Royal Infirmary.

In speaking of angina pectoris, a by no means slight difficulty one encounters at the outset arises from the fact that the clinical and pathological scope of this affection is so ill-defined.

If we regard the disease in its clinical aspect only, we must include in the term angina all cases in which the cardiac area is the seat of paroxysmal pain of a particular character. We must include not only pseudo-angina, but many cases of simple cardiac neuralgia. On the other hand, if we have regard only to the pathology of angina pectoris, we find that the pathological associations demand the inclusion of what is termed angina *sine dolore*, and perhaps even cardiac asthma. The *pain* has been variously attributed to acute spasms, and to acute dilatation of the heart, to a neuralgia of the cardiac nerves, to a hyperæsthesia accompanying fatty change in the heart-muscle, etc., and the views as to the pathology of angina are still more numerous and diverse.

Sir Richard Quinn defines angina pectoris as "an affection of the chest, characterized by severe pain, faintness, and anxiety *occurring in paroxysms*; connected with disorders of the pneumogastric and sympathetic nerves and their branches, and frequently associated with organic disease of the heart."

That fatal cases of angina pectoris are generally found associated with one or both of two conditions, namely fatty degeneration of the cardiac muscle and atheromatous arteries, especially atheroma of the coronary arteries, is almost universally conceded; but inasmuch as in the vast majority of fatty heart, and hearts in which the coronary or other arteries are found atheromatous, there has been no history of angina pectoris during life, the natural inference is—that the cardiac lesions are "a cause rather of the fatal result than of the disease itself" (Sansom), or tend to produce a condition of heart failure, relative or absolute, which is a necessary factor for the occurrence of the anginal pain. But a certain number of undoubted cases of angina pectoris ending fatally, even in the young and apparently healthy, without any cardiac lesion being discovered *post mortem*, absolutely disprove the view that cardiac disease is an essential factor in the affection, and we are justified in

saying that there is really but little evidence that any cardiac lesion is in itself a sufficient cause of angina.

Yet it can hardly be doubted that the lesions so very frequently observed in the neighborhood of the cardiac nerves and plexuses in fatal cases indicate that these lesions are something more than a mere coincidence. Possibly the indications of neuritis account somewhat for the severity of the pains in many cases, and possibly too the medullary centres with which they are connected are rendered hyperæsthetic by these peripheral nerve lesions. Reflex irritation of the nerve centres may simply induce cardiac inhibition by the vagus, with a sense of arrest of the heart and a crushing pain similar to the symptoms that Professor Czermak produced in himself by pressing on his vagus as it lay over a vertebral exostosis. In many instances, moreover, it would seem that the heart alone is affected by this paroxysm, there being neither vaso-motor constriction nor dilatation.

While fully recognizing these various pathological forms of the disease, I confine my remarks rather to the variety known as vaso-motory angina, pure or mixed, in which arterial constriction or dilatation is an essential element. Various types of angina may of course be distinguished, but clinically they are almost invariably observed in combination; the crushing pain and pallor of the vagus type being associated with the radiating neuralgic pains which Dr. Sansom has recently described as due to the sympathetic.

There are several features of interest in the following case:

“P. G., aged 42, a painter, came complaining of ‘rheumatic’ pains in the chest and left shoulder, for which he had been under treatment for some time. He was struck by the fact that even carrying weights in his right hand brought on his ‘rheumatic’ pain in the left shoulder and arm, a remark which at once suggested that the pain was really anginal and not rheumatic. He presented that peculiar pallor and anxious aspect which accompanies aortic lesions. The heart was enormously hypertrophied and acting forcibly. There was a well-marked aortic regurgitant and a soft systolic mitral *bruit*, and he had a typical Corrigan pulse. The pains were generally induced by slight exertion, yet were not very severe. But in addition to the anginal pains, he would get attacks of violent palpitation. Often these two symptoms were combined; not infrequently they occurred separately. While tincture of cactus relieved the palpitation, it was less useful as regards the pain, which nitro-glycerine invariably relieved at once.

I watched him for eighteen months, the anginal attack gradually becoming more and more frequent. For the next year or so the slightest breath of air would induce a paroxysm, merely lifting the night-shirt to auscultate the chest as he lay in bed very frequently induced an attack, so very sensitive was the vaso-motor mechanism. Toward the end of life the anginal attacks became almost continuous, and were not overcome by nitro-glycerine or nitrite of amyl."

This case affords an example of the vaso-motory *angina gravior*. As Dr. Douglas Powell puts it, "in vaso-motory angina the neuro-vascular system is unduly sensitive, so that the arterioles under slight extra stimuli, exercise, chill, exertion, contract suddenly, raising the blood pressure, which habitually ranges high, and causing the heart to labor painfully. . . . The mechanism of vaso-motory angina is paroxysmally increased blood-pressure from spasm of the systemic vessels."

But the question I would ask is, What is the meaning of this *persistent* high tension? and What is the cause of the hyperæsthetic condition of the neuro-vascular system, and the consequent *paroxysmal* increase of an already high arterial tension?

May we not often regard persistent high arterial tension as a compensatory, *i. e.* a conservative, process. analogous to increased action of the heart in compensatory hypertrophy; and the paroxysmal arterial spasm as a sign of exhaustion of the vaso-motor centre in its endeavor to maintain this high tension? I shall endeavor to give some reasons for such a view.

In order to trace one of the connections between angina pectoris and persistent high tension we may first consider—*What are the predisposing causes of angina pectoris?*

First, in the vast majority of cases of true angina pectoris there is the neurotic element. The intimate dependence of the attacks on the neurotic element was early recognized by Trousseau, and many other clinicians go so far as to describe angina as a pure neurosis. It certainly occurs with greatest frequency in those who belong to the refined and highly educated classes; this is so widely recognized that I need not do more than allude to it.

But apart from the general tendency to be associated with a nervous temperament we find that the predisposing causes are those which are attended with increased arterial tension and atheromatous arteries. The influence of age is undoubted, the pulse tends to be maintained at a higher tension pitch after forty-five, while Quain states that quite 80 per cent. of cases of angina occurs after forty years of age. Sedentary habits, such as office life or literary pursuits, are liable to induce excessive

indulgence in animal food. In patients with a gouty diathesis such excess may of course be simply relative, but the tendency of gout to lead to angina is undoubted, and it is certainly usually accompanied by chronic high arterial tension. Enlargement of the heart is often found with arterio-sclerosis, and is attributed to the peripheral obstruction the organ has to contend against. But it is far more probable that the arterio-sclerosis is merely produced by the same condition as caused the enlarged heart—namely, persistent high tension. Fraentzel calls these cases of “enlargement of the heart, resulting from the excessive ingestion of food and alcohol, or from excessive work.” Arterio-sclerosis, or *endarteritis deformans*, is frequently found to be associated with enlargement of the heart; but enlargement of the heart has been found without arterio-sclerosis, extreme arterio-sclerosis without enlargement of the heart. “A common cause capable of producing, on the one hand enlargement of the left ventricle, and, on the other, arterio-sclerosis, is abnormal high tension of the arterial system, and increase of tension in the arteries may be produced by excessive indulgence in the pleasures of the table or from excessive bodily strain. In the well-to-do it is the indulgence in the pleasures of the table, and in the working classes long continued muscular labor, that give rise to chronic high tension, which sooner or later results in arterial and valvular degeneration.” The effect of alcohol in originating arterial degeneration is probably chiefly due to its interfering with the normal metabolic processes, leading to the accumulation of impurities in the system,* and the effects of sedentary habits arise too in the same way. “Constipation,” said Broadbent, “is a very important cause of high arterial tension.”

Other causes of high tension are hysteria, anæmia, diabetes in elderly patients, and Bright’s disease, especially chronic interstitial nephritis.

Further, if a relationship exists between persistent arterial tension and angina we may well consider—*What is the clinical import of such chronic high tension?* The pathological views of Gull and Sutton and of Johnson, in reference to so-called arterio-capillary fibrosis, are reconcilable if we adopt Cohnheim’s view that increased arterial tension in kidney lesions is a conservative process, that the high tension is in fact the means adopted by nature to render a defective kidney capable of efficiently performing the work of eliminating waste matters.† The constant variations in arterial tension, the constant activity of the vaso-motor mechanism which is presided over by the

*See Broadbent, *The Pulse*, page 162.

†See Hilton Fagge, *Medicine*, Vol. II.

medullary vaso-motor centres, constitute one of the most striking instances of our physiological adaptability to our ever-varying environment and physiological state. "The circulation is the servant and not the master" (Michael Foster). The normal mean arterial tension varies widely in different individuals: in some it is relatively high, in others relatively low. When it is found to be abnormally high, it is always necessary to presume that this physiological mechanism has failed us, and to regard the high tension as anything else than a physiological adaptation to compensate for a pathological state. It is not too frequently regarded as simply the result of abnormal, excessively impure, blood, irritating the arterial coats and bringing about a pathological arterial contraction which must be reduced.

The causes of arterial sclerosis are all conditions which induce persistent high arterial tension, and it is more reasonable to regard the high tension and the pathological condition of the blood as the cause of the kidney lesion than the kidney lesions as the cause of the high tension.

There are indeed many valid reasons for regarding the thickened muscular coat of the arteries as a compensatory hypertrophy, which, like hypertrophy of the heart, meets a physiological demand. If in Bright's disease the vaso-motor centres fail to induce increased arterial tension, or if they fail to maintain it, the patients lose the advantage of such a condition and do badly. Dr. Broadbent remarks that if high tension be persistently wanting when the kidneys are diseased, it is a prognostic sign of the worst augury; he has observed that such cases generally do badly, and certainly my own more limited observations accord with this statement.

The peculiar pallor that accompanies certain disorders of the vascular system is, I think, of great interest in connection with the question of high tension. This condition is met with in aortic stenosis and aortic incompetence, and markedly in fatty heart. It is not due to anæmia, as is often supposed, for I have estimated the amount of hæmoglobin in some well-marked instances, and found it as high as 90 per cent. of the normal. Nor is it due to failure of the circulation, for it is observable in cases in which there is no evidence of failing circulation. Moreover cyanosis and not pallor is the result of failure of the circulation.

In aortic stenosis Dr. Broadbent remarks that "the entire arterial system seems to contract down upon the diminished blood stream, and the small diameter of the radial and other arteries is a constant phenomenon."* May we not attribute

**The Pulse*, p. 280.

the extreme pallor of aortic regurgitation to a persistent vaso-motor constriction, which has the effect of protecting the capillaries from the full force of the very powerful ventricular contraction? It is of course impossible to have a high tension pulse in such a valvular lesion, but there would appear to be a constant demand on the vaso-motor centre to maintain a condition of virtual tension. Such excessive functional activity of the medullary centres may well lead to exhaustion and result in vaso-motor in-coördination.

"It would seem, therefore," says Dr. Sansom, "that for the production of the *ensemble* which we term angina pectoris, there must be a condition giving rise to an exaggerated conduction of impulses, by the sympathetic filaments, or the vagus filaments, or by both, in the neighborhood of the heart, to the cerebral centres; that there must also be such an affection of the vaso-motor centre as to superinduce a tonic spasm of the arteries, an exception possibly being in case of aortic insufficiency, where a violent shock to the interior of the artery may be sufficient to produce the irritant effect. The attack of angina pectoris may be considered as a commotion in the cerebro-spinal centres, involving the sensory area, the vagus area and the vaso-motor area."

The essential factor in the disease is then functional instability of the cardiac and vaso-motor medullary centres. This instability may result from peripheral irritation or functional exhaustion, and if angina pectoris is essentially a neurosis of this region we can not be surprised at its frequent association with glycosuria, a point which Dr. W. M. Ord has recently emphasized.

How can we explain the connection between persistent high tension and sudden paroxysmal increase in the arterial tension from the general vaso-constriction.

Conditions which tend to exhaust nerve centres induce in them a hyperæsthetic state, a want of tone, in which there is increased response to slight stimuli. It matters not whether we consider the higher nerve centres which constitute the material basis of the emotions or the lower which control the muscular system; excessive functional activity results in a condition of irritability. Does it not seem that we have in a prolonged effort to maintain an excessive arterial constriction an explanation of the supervention of the unduly sensitive state of the neuro-vascular mechanism, on which Dr. Douglas Powell has recently laid stress.

The *therapeutical indications* naturally fall under two heads: (a) the relief of the attacks; (b) the relief of the pathological state which culminates in the attacks.

As regards the measures to be adopted during an attack of angina pectoris, I say nothing here. They are well known to every medical man. But the paroxysmal attack of pain is not the disease, any more than is an epileptic fit epilepsy; it is in each case only the manifestation of the disease, and it is useless to expect anything of the nature of a cure unless the primary cause of the outbreak can be overcome.

In many cases such as those which arise from disease implicating cardiac nerves, and those due to reflex irritation, as in that of the late Mr. Hilton, in whom angina pectoris resulted from a cancerous growth in the stomach, the primary cause can not of course be removed; but when the instability of the nerve structures is induced by the presence of toxic matters, in the circulation, such as nicotine, directly, the accumulation of waste matters that the kidneys fail to eliminate, indirectly, and so forth, much help will be afforded by regulating the habits or diet of the patient. Every condition of life that tends to induce persistent increased arterial tension should be avoided.

In the majority of cases in which cardiac lesions, or other irreparable pathological conditions, necessitate a high arterial tension, the administration of such remedies as will give tone to the nerve structures implicated, and thus lessen their instability, will be found beneficial, especially *arsenic* and *strychnine*.

Many clinical observers point to the analogy between angina and asthma. "In order to form a conception of the manner in which strychnine relieves asthma, it must be borne in mind that under no circumstances does spasm exist in virtue of any undue supply of nerve tone to the bronchial muscle, but rather to a perverted or depressed state of the pulmonary nerve supply, both central and peripheral, and a consequent loss of respiratory co-ordination. The most rational plan then of treating the asthmatic condition is not one which lowers, but one which elevates the tone and increases the normal resistance of the pulmonary nerves. This therapeutic indication is amply supplied by strychnine, which on account of its elective affinity for the respiratory centre, stimulates and invigorates without paralyzing these structures, unless it be pushed beyond the point where it begins to manifest its toxicological qualities."*

But strychnine possesses equally an elective affinity for the vaso-motor and cardiac centres of the medulla, and its beneficial action in angina pectoris is explicable in a precisely similar manner. In cases where the persistent high tension may be regarded as conservative, the administration of such remedies as strychnine and even digitalis will, by giving tone to the nerve

*T. J. Mays, *International Clinics*, Vol. II, p. 63.

centres, aid the heart and neuro-vascular mechanism to perform the task of maintaining arterial tension.

I will illustrate my meaning by the following case.

“R. J., aged sixty-four, a rather spare pale-looking man of anxious countenance, suffered from the first anginal pain when walking up hill, on a cold day in November, 1891. Suddenly he was seized with a very intense crushing pain in the mid-sternum, his breath seemed to stop, he could not move or speak, and thought he was going to die. He says his heart seemed to beat violently at first, but he soon felt very cold and faint. In a few minutes he recovered sufficiently to enable him to get home, but the pain did not pass off for an hour. He had had several attacks subsequently, they are often brought on by the slightest exertion or the least excitement, and he is more liable to them at night when he is tired. Lately he had had generally three or four attacks every day. He passes water freely after an attack, and he declares that when his urine has been less copious than usual he is especially liable to the attacks. When he came to me, I found that his heart was large, impulse forcible, no *bruit* or evidence of organic disease. But his arteries are very atheromatous. The pulse is rather large and not sustained. I gave him three minims of the tincture of cactus, three times daily, and a draught containing a hundredth of a grain of nitro-glycerine, to take when the spasms came on. He always got immediate relief from the draught, and the attacks became less frequent, while he continued his mixture. On March 17, however, I gave him fifteen minims of the tincture of digitalis daily, to help in maintaining his arterial tension and as a cardiac tonic, and the draught to be taken when necessary. From that day he improved immensely. After a fortnight he declared that he felt very much better than he had done for a long time. This treatment has been continued, and now he seldom requires the draught, as it is only very occasionally indeed he gets an attack. An interesting feature in this case is the occurrence recently of hepatalgia, which he finds is always relieved by the nitro-glycerine draught.”

I mention this case to illustrate especially the beneficial action of digitalis in some cases of angina pectoris—that is to say, digitalis unguarded by nitro-glycerine.

In the majority of well-marked grave cases of angina, the occurrence of the attacks can only be warded off by the continuous exhibition of the nitro-glycerine class of remedies which overcome the arterial constriction, or in exceptional cases these combined with digitalis, as recommended by Dr. Douglas Powell. But I venture to submit that it is possible that the too

frequent and uniform resort to remedies which render futile any physiological effort to raise the arterial tension may result in really increasing the malady, placing the patient in a far less favorable condition and even beyond the hope of cure. These remarks apply especially to renal affections, but I think that there is sufficient reason to believe that the principle holds good in the milder and earlier cases of angina pectoris. It is not so very long ago that a hypertrophied heart was regarded as a pathological condition to be counteracted, now we regard cardiac hypertrophy as a friend rather than a foe. May we not also regard arterial high tension in a friendly light? In reference to angina pectoris such a view can only apply in a most limited sense; but there are very few cases where nerve tonics are not in the long run more beneficial than nerve sedatives.

BROMOFORM IN WHOOPING COUGH.

By F. W. BURTON-FANNING, M. B. (Camb.), M. R. C. P.

The value of bromoform is not, I think, sufficiently appreciated in this country; but it has given far better results in my hands than any of the other treatments usually recommended for whooping cough. It was first advocated by Stepp, who reported one hundred cases of whooping cough treated with bromoform without a single failure. His satisfactory results were endorsed by Schippers and other continental physicians. I have now notes of thirty cases of whooping cough treated with this remedy since last March. They occurred chiefly in the out-patient department of the Jenny Lind Infirmary; they were separated as far as possible from other cases, and they were followed to their homes, when necessary. Their ages ranged from three months to eight years.

Bromoform (CHBr_3) is a colorless oily liquid, with an ethereal smell and sweet taste; it is insoluble in water, and, after many experiments conducted by our dispenser, Mr. Balls, we find it most conveniently prescribed thus:

Bromoform	Mj.
Pulv. Tragacanth. Co.....	3 ss.
Syrup. Simp.....	3 ss.
Aq. ad	3 ss.

This forms a pleasant mixture, and the bromoform is well suspended. My experience leads me to fix the appropriate dosage of bromoform as follows: Mss for children under one year, Mj up to three years, Mij up to six years—thrice daily to commence with. If necessary, these doses may safely be gradually increased till they are doubled.

Bromoform is decomposed by exposure to light, and becomes brown from liberation of bromine, when it must on no account be used. Messrs. Corbyn and Stacey have supplied us with large quantities of this drug, which, when kept in the dark, has remained good for many weeks. By impressing on the mothers the necessity of thoroughly shaking the bottle before each dose, and by never giving more than a week's supply at a time, no ill effects have been seen in my cases. Owing, however, to its insolubility and its tendency to decompose, the above precautions must be insisted on.

A case of poisoning by bromoform, under curious circumstances, occurred at Cromer, where Dr. Dent was summoned to a child who had drunk the contents of a bottle found by it on a dust bin. The child was unconscious, breathing stertorously, with unequal insensible pupils and weak and irregular pulse. The stomach pump was immediately used and hot coffee administered with success, the symptoms gradually abating till only drowsiness was left. Mr. Burton, of this city, recognized the name on the label of the bottle as that of a patient for whom he had prescribed bromoform *two months* previously. I have heard of two other cases in which drowsiness, and symptoms resembling intoxication, were ascribed to the administration of bromoform which had been allowed to decompose.

Among my thirty cases one death occurred in an infant whose whooping cough was complicated by capillary bronchitis, its condition being desperate when the treatment was commenced, and only one dose of the medicine being retained.

Otherwise the results have been uniformly gratifying. My notes show that usually on the second day of treatment the number of paroxysms are noted as much fewer, falling often from about one an hour to one or two a day, and in mild cases ceasing altogether. The attacks are also shorter and less violent, vomiting *always* ceases, those cases which have epistaxis or other hæmorrhages lose these symptoms, expectoration becomes more easy, and bronchitis gradually disappears.

The following case may be taken as a typical one:

A. L., 2½ years, has had whooping cough for ten days, having a paroxysm about every hour, accompanied by vomiting and expectoration of streaks of blood; his "breath stops," and once he fell down during an attack. Bromoform (Mj) was ordered three times a day, and on the second day he had only two paroxysms, and no vomiting or stoppage of breath. Afterward he had none until at the end of a week belladonna was substituted for the bromoform, when the whoop returned, again, however, to disappear on resuming bromoform, the use of which was continued for five weeks.

I consider that the drug is of specific power against the main symptom of whooping cough--the paroxysmal cough, on which depend the chief dangers of the disease. I can not satisfy myself that the duration of the illness is materially shortened, the average length of the paroxysmal stage in my cases being thirty-one days.

During this time the patients were free from the characteristic cough and its attendant miseries, though these all returned at once, if the bromoform was discontinued within four weeks.

The remedy is sufficiently specific in its action to be of the greatest use in diagnosis. In seventeen doubtful cases in which I gave bromoform, its success or failure to relieve the cough led me to the correct conclusion as to the nature of the disease, as subsequently established by other considerations. In my experience chronic enlargement of the tonsils, with perhaps some temporarily superadded inflammation, is the condition which is most commonly confounded with whooping cough. Children with this affection frequently have severe paroxysmal cough, followed by vomiting and sometimes by an attempt at a whoop; but in this condition no relief is afforded by bromoform. I have not had an opportunity of testing satisfactorily its action in laryngismus stridulus, but I have found it useless in any form of bronchitis, emphysema, or asthma. I hope at a later date to make some remarks on its probable *modus operandi*, and its use in other diseases; but meanwhile I desire to commend it for trial in this common, but by no means trivial, affection of childhood.—*Practitioner*.

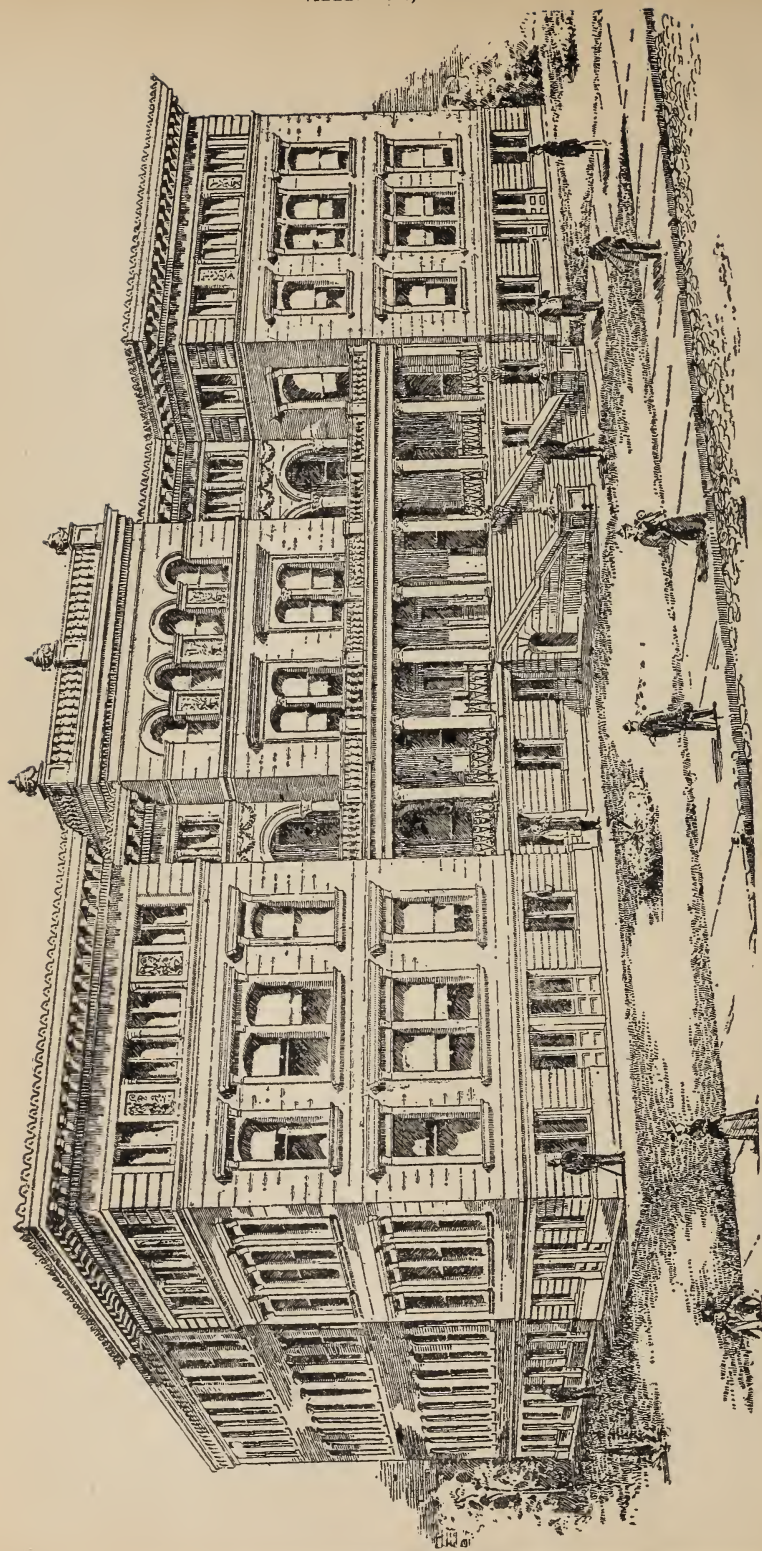
TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON GENERAL }
U. S. MARINE HOSPITAL SERVICE. }
WASHINGTON, April 13, 1893. }

A board of officers will be convened at Washington, D. C., June 26, 1893, for the purpose of examining applicants for admission to the grade of assistant surgeon in the U. S. Marine Hospital Service.

Candidates must be between twenty-one and thirty years of age, graduates of a respectable medical college, and must furnish testimonials from at least two responsible persons as to character.

For further information, or for invitation to appear for examination, address

THE SUPERVISING SURGEON GENERAL,
U. S. Marine Hospital Service, Washington, D. C.



MEDICAL DEPARTMENT, TULANE UNIVERSITY OF LOUISIANA.

Fronting Canal Street, between Villere and Robertson Streets.

Dimensions, 156 feet front by 123 feet depth. The Central Building measures 76 feet front by 88 feet depth, and each wing 40 feet front by 123 feet depth. The building occupies 16,528 square feet of the college lot, which contains 62,704 square feet.

State News and Medical Items.

THE NEW MEDICAL COLLEGE BUILDING.

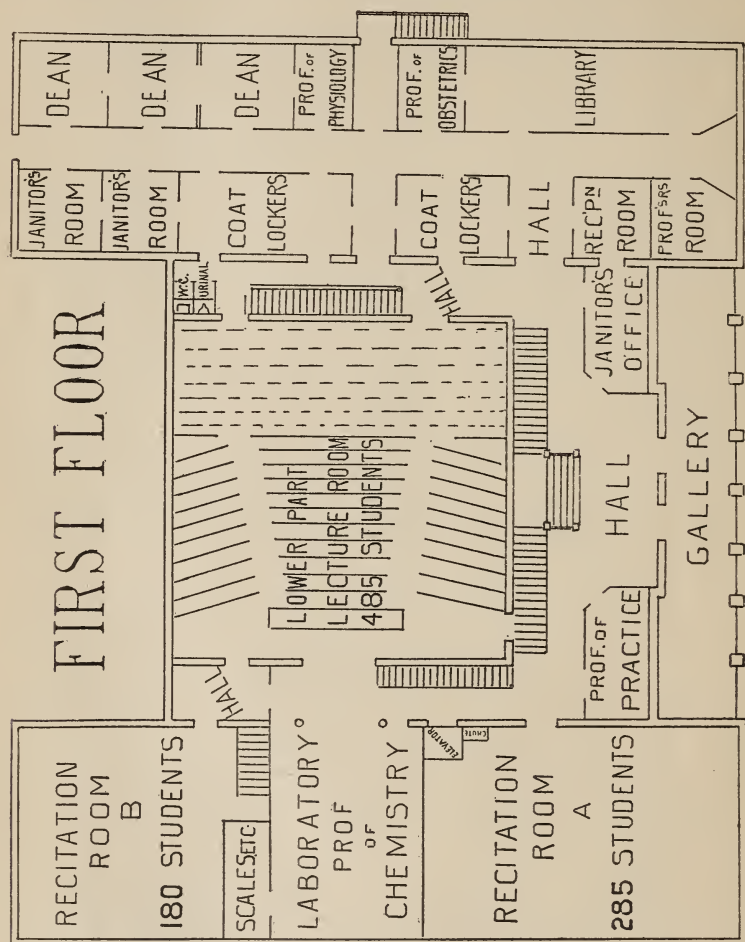
The corner-stone of the new Tulane Medical College, on Canal street, was laid on May 6, 1893. The ceremonies were simple, but impressive, and were witnessed by a large number of persons distinguished in the civic and professional walks of life. Among those in attendance were Mrs. Ida A. Richardson, wife of the late Surgeon Tobias Gibson Richardson, whose munificent gift of \$100,000 contributed to the erection of the beautiful and stately building; Mrs. Cuthbert Slocomb, and a niece of Mrs. Richardson.

The Board of administrators of the Tulane Educational Fund, the *ex officio* members of the board, the officers and members of the faculty and instructors who were present were as follows: Hon. C. E. Fenner, president of the board; Jas. McConnell, Esq., first vice president, and Rev. B. M. Palmer, D. D., LL. D.; Dr. T. S. Kennedy, E. H. Farrar, W. R. Stauffer, Cartwright Eustis, Henry Ginder, John T. Hardie, R. M. Walmsley, J. C. Morris, Geo. Q. Whitney, L. M. Finley, J. B. Levert, Dr. C. J. Bickham and Walter C. Flower. Senator E. D. White, second vice president of the board, was absent. Of the three *ex officio* members of the board Hon. John Fitzpatrick was the only representative.

The officers of the university were represented by President William Preston Johnston, LL. D., Wm. O. Rogers, LL. D., secretary, and Mr. Joseph A. Hincks, treasurer and secretary of the board.

The faculty was represented by Dr. Stanford E. Chaillé, dean of the medical faculty; Dr. Joseph Jones, professor of chemistry; Dr. Ernest S. Lewis, professor of obstetrics; Dr. John B. Elliott, professor of medicine; Mr. J. L. Cross, professor of mathematics; Mr. J. Hanno Deiler, professor of German; Mr. Alcee Fortier, professor of French; Mr. Brown Ayres, professor of physics; Mr. Robert Sharp, professor of Greek and English; Mr. H. C. Miller, dean of the law department; Mr. John M. Ordway, professor of applied chemistry; Mr. Wm. Woodward, professor of drawing; Mr. Henry Denis, professor of civil law; Dr. Edmond Souchon, professor of anatomy; Mr. Ashley D. Hurt, professor of Latin; Mr. Lyman C. Reed, professor of English; Mr. John R. Ficklen, professor of history and rhetoric; Mr. John W. Caldwell, professor of geology; Mr. Ellsworth Woodward, professor of drawing; Dr. A. B. Miles, professor of materia medica; Mr. Brandt V.

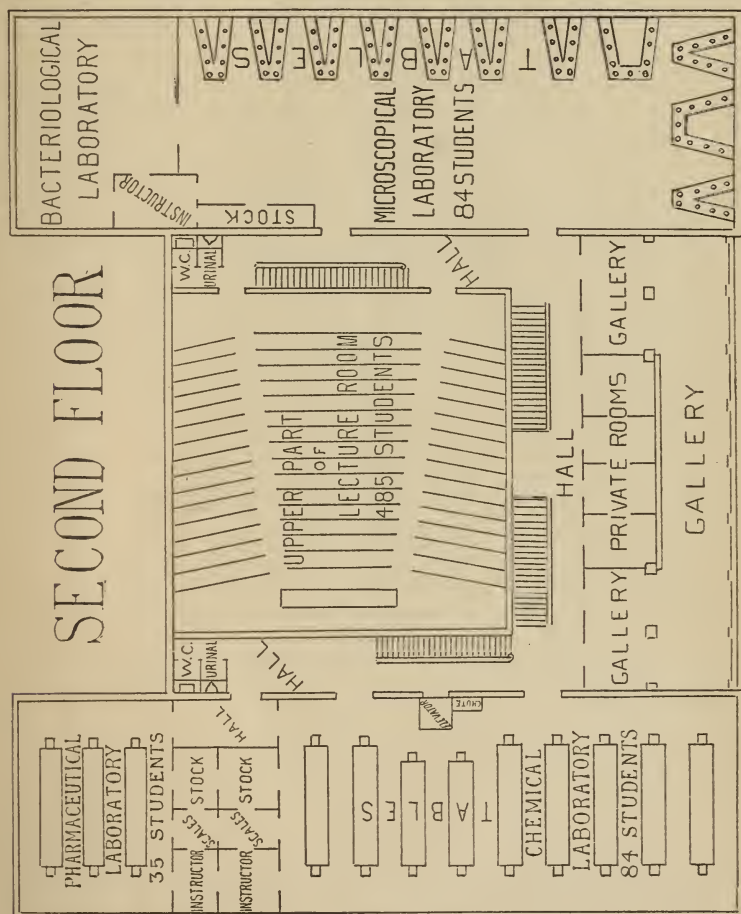
B. Dixon, professor of metaphysics; Mr. Thomas J. Semmes, professor of constitutional law; Mr. Henry B. Orr, professor of biology; Mr. Jos. H. Dillard, professor of Latin; Mr. Chas. G. Gill, assistant professor of Greek; Mr. J. W. Pearce, professor of mathematics and English, High School; Mr. D. R. Buchanan, assistant professor of penmanship and book-keep-



ing: Mr. E. W. Ordway, professor of chemistry and physics; Dr. Rudolph Matas, demonstrator of anatomy and chief of clinic, and Dr. L. F. Reynaud, lecturer on physical diagnosis.

After the invited guests and those interested in the laying of the corner stone had been provided with seats, which had been thoughtfully placed in the shadows of the big building, thereby protecting them from the rays of the sun, the ceremo-

nies of the day were formally begun. It was then about 4:30 o'clock. Hon. C. E. Fenner, president of the Board of Administrators, who acted as spokesman, said that on this interesting occasion it was intended to invite only a few persons, none but those interested in the ceremony or directly connected with the institution. The ceremonies on this occasion would in consequence be very brief. It was proposed, however, at a

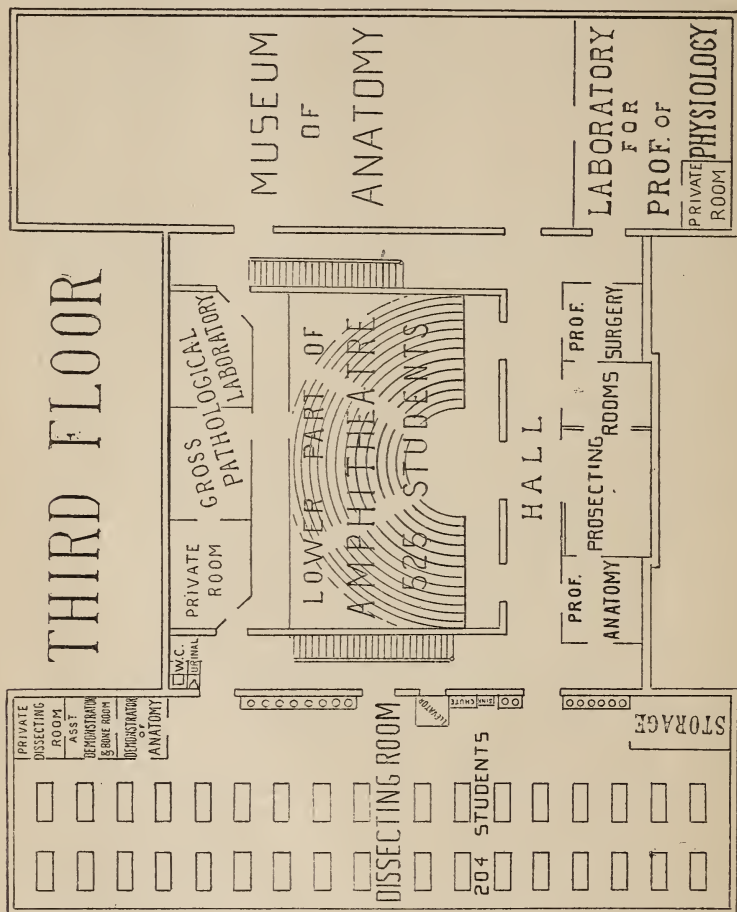


future time to give a more elaborate and more extensive public affair, which would probably take place when the building was completed.

The building, he said, had been constructed by the board of the Tulane Educational Fund, out of moneys donated by a lady belonging to one of the oldest and most prominent families of the State, whose own life had been enlarged, expanded

and ennobled by the influences exerted by a charitable mind and enlightened ideas. She but followed the natural characteristics which she inherited from her noble descent.

The building was, Mr. Fenner said, a fitting monument to a truly great and good man, who had devoted his whole life to the advancement of humanity in the enlightened profession—a



profession that he followed, and a profession that he honored so long and so magnificently illustrated.

The speaker then held up a small box to the view of the spectators, and pointing to it said that the little box, which was to be deposited in the corner stone, contained copies of the daily papers published yesterday, and it was a singular coincidence that those same papers contained elaborate accounts of a celebration which took place the day before which illustrated the wisdom and grandeur of a monument left by a great man.

Thousands of children had the day before celebrated McDonogh's day and paid encomiums to the memory of him who had founded these educational institutions.

How much more grand and lasting and contributive to the ennoblement of humanity were monuments such as those. How much more lasting than cenotaphs, than earthly monuments, than magnificent sarcophagi, were such memorials to the dead. They did nothing for humanity. The hope would be cherished, Mr. Fenner said, that the example that had been set by the honored lady and by the founder of Tulane University would be in the future more generally followed, and that men who measure their fellow men by such monuments would perpetuate their memories by monuments more lasting than brass.

The contents of the little metallic box were then read by Mr. Fenner, which was said to contain the following: Catalogue of Tulane University of Louisiana, 1892-93; charter and by-laws of the Board of Administrators of the Tulane Educational Fund; memorial address delivered on commencement day, April 5, 1893, by Prof. Stanford E. Chaillé, A. M., M. D.; annual report of 1893 to the president of the university, by Stanford E. Chaillé, made on the annual commencement of the Medical Department of the Tulane University of Louisiana, held on April 5, 1893; biographical sketch of Prof. T. G. Richardson, reproduced from the May, 1893, number of the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL; a copy of the letter of Mrs. Ida A. Richardson, wife of Dr. T. G. Richardson, donating \$100,000 toward the erection of the new medical college building; portrait of Paul Tulane, founder of the Tulane University; portrait of Randall E. Gibson, first president of the Board of Administrators of the Tulane Educational Fund; portrait of Dr. Tobias Gibson Richardson, one of the incorporators and administrators of the Tulane University; copy of the *Times-Democrat* of May 6, and copies of like date of the *Picayune*, *Bee*, *German Gazette* and *Delta*; one copper cent of the coinage of 1891, one nickel of the coinage of 1893, one half-dime of the coinage of 1854, one dime of the coinage of 1892, one silver quarter of the coinage of 1892, one half-dollar of the coinage of 1893, one silver dollar of the coinage of 1893, one gold dollar of the coinage of 1862, and one World's Exposition half-dollar of the coinage of 1892.

Rev. Dr. B. M. Palmer then offered up a fervent prayer, during which the audience paid respectful attention. The corner stone, which was subsequently placed in position, bore the following inscription, on the front, or Canal street side: "Erected by the Administrators of the Tulane Educational Fund, with funds donated by Ida A. Richardson, wife of Tobias Gibson Richardson, M. D., of New Orleans, A. D. 1892." On the Villere street side of the tablet were the words: "Sully & Toledano, architects."—*Times-Democrat*.

MORTUARY REPORT OF NEW ORLEANS.

FOR APRIL, 1893.

CAUSE.	White.....	Colored..	Male.....	Female....	Adults...	Children..	Total.....
Fever, Yellow							
“ Malarial (unclassified)....	4	4	3	5	7	1	8
“ Intermittent	1		1		1		1
“ Remittent	2			2	1	1	2
“ Congestive.....	4	2	2	4	1	5	6
“ Typho	1	1	1	1	2		2
“ Typhoid or Enteric.....	1		1		1		1
“ Puerperal	1			1	1		1
Influenza.....	3			3	3		3
Scarlatina							
Measles							
Diphtheria	1		1			1	1
Whooping Cough	2	2	1	3		4	4
Meningitis	11	8	13	6	3	16	19
Pneumonia.....	18	13	18	13	24	7	31
Bronchitis	12	4	11	5	7	9	16
Consumption.....	35	42	43	34	76	1	77
Cancer	5	1	1	5	5	1	6
Congestion of Brain.....							
Bright's Disease (Nephritis)	19	9	18	10	28		28
Diarrhœa (Enteritis)	31	8	22	17	11	28	39
Cholera Infantum	29	13	22	20		42	42
Dysentery.....	2	4	5	1	6		6
Debility, General	1	1	1	1	2		2
“ Senile	14	9	12	11	23		23
“ Infantile	4	2	1	5		6	6
All other causes	158	85	134	109	140	103	243
TOTAL	359	208	311	256	342	225	567

Still-born Children—White, 20; colored, 20; total, 40.

Population of City—White, 184,500; colored, 69,500; total, 254,000.

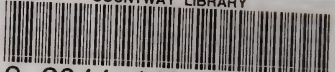
Death Rate per 1000 per annum for month—White, 23.34; colored, 35.91; total, 26.78.

F. W. PARHAM, M. D.,

Chief Sanitary Inspector



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